E-BUSINESS ADOPTION AMONG SMALL AND MEDIUM ENTERPRISE (SMEs) IN GHANA.

A CASE STUDY OF BUSINESSES IN THE ACCRA MALL.

by

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COMMONWEALTH EXECUTIVE MASTER OF BUSINESS ADMINISTRATION

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DECLARATION

I hereby declare that this submission is my own work towards the Executive Masters of Business Administration and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University except where due acknowledgement has been made in the text.

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Dean, IDL                                   Signature                               Date
DEDICATION

To my daughter Akosua Dufie Asamoah Addo and my lovely wife Dorcas Appiah Addo.
ACKNOWLEDGEMENT

I am greatly grateful to the almighty God by whose grace I have been able to complete this project. I wish to express my indebtedness to Mr. David Asamoah who painstakingly supervised this thesis and offered very useful criticisms and suggestions to make this study a success. His patience and professional guidance went beyond the call of duty. Many thanks also go to the management of Accra Mall who assisted in gathering the needed information to accomplish this study. Lastly my thanks go to all my friends especially James Peprah and Yahaya Sumani who provided me all the needed information and support to make this work a success.

God richly bless you all.
ABSTRACT

E-business can be an important source of competitive advantage for most business organizations especially small and medium sized (SME) businesses. Recently, researchers have focused on e-business adoption both in the developed and developing countries.

To this regard, the study’s main objective is to identify the level of e-business adoption among SMEs operating at the Accra Mall of Ghana from the perspective of CEOs, management and staff using the e-adoption stage model and also investigating major perceived benefits derived from adopting e-business which includes: reduce cost of business operations, easy and fast exchange of document and information, improve customer service, and increase the availability of products/services to customers and providing managers better access to information. From the study prominent perceived barriers to the adoption of e-business such as a situation where most hardware, software and qualified personnel are being imported to implement and support ICT solutions, poor network infrastructure and problem of online payment system raises much worry for the e-business adoption.

The data for the study were collected through sets of questionnaires administered to respondents, as well as interviews with key stakeholders in the industry. For this study, purposive sampling technique was used to select respondents and data collected was analysed by the use of Microsoft Excel.

The study revealed the level of e-business adoption among SMEs to be dynamic depending on the strategy deployed by the organization. Also the unconscious adoption by most SMEs in ordering goods and services on-line from abroad, exchange of documents via e-mail and text messages were all levels of e-business adoption by SMEs unknowingly. Again the problem of government support in promoting E-business and internet fraud were all unveiled from the results.

The researcher recommends government efforts in supporting SMEs which is the engine of growth to embrace this novelty by formulating and implementing policies that would promote e-business for which every country is striving to achieve. Finally, the study
recommends a practical framework modified from Cooper and Burgess, (2001) to serve as a
guide to SMEs when adopting e-business strategies in the business.

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LIST OF ABBREVIATIONS

ADSL  Asymmetric Digital Subscriber Line
ADB   Agriculture development Bank
ANAO  Australian National Auditing Office
B2B   Business to Business
B2C   Business to Consumer
B2G   Business to Government
BPL   Broadband over power lines
CEO   Chief Executive Officer
E-    Electronic
EC    European Commission
G2C   Government to Consumer
GDP   Gross Domestic Product
GEDC  Ghana Enterprise Development Commission
GSS   Ghana Statistical Service
ICT   Information Communication Technology
ICT4AD Information Communication Technology for Accelerated Development
ISP   Internet Service Provider
IT    Information Technology
NBSSI National Board for Small Scale Industries
OECD  Organization for Economic Co-operation and
Development

PC    Personal Computer
PSTN    Public Switched Telephone Network
R&D    Research and Development
ROI    Return on Investment
SAFAD    Swedish Agency for Administrative Development
SME    Small Medium Enterprise
VOIP    Voice Over Internet Protocols
VSAT    Very Small Aperture Terminal
CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND TO THE STUDY

According to Uzoka (2004), the global wave of ICT development has become a strong driving force in almost every aspect of human endeavour. Electronic business is fast gaining a prominent place in the global market matrix. It is estimated that in the next decade, E-business activities would be a major source of foreign exchange, a key indicator of national development. Conducting business in many countries, and working through various partners such as procurements, suppliers, dealers, importers, exporters and sales companies, and the coordination between these actors has become vital so as to be successful in the competitive environment (Ahu et. al, 2010).

Mann et. al. (2000), reports that E-business develops quickly in the world and the sales volume doubles every nine months. Now, the sales volume of E-business is one hundred billion dollars and it expands 262%. In 2000, there were three hundred and fifty million persons in touch with the Internet and at that time, the sales volume of E-Commerce was one thousand billion dollars. The rate of increase gets to 3206%. And the sales volume is the total of Business to Consumer (B2C) and Business to Business (B2B).

In the past ten years, the economy of America continues to be good, so it offers stable surroundings for the development of E-business. In the world, the economy of Asia has been restored, the
competition mechanism of Europe has been resuscitated and more people have the spirit of striving. All of these stimulate the development of E-business (Jiang et. al., 1999).

Now, all of the countries in the world think highly of E-business and make it as impetus to the development of economy. Even they think E-business has more importance than the Industrial Revolutionary. It is getting more and more attention from entrepreneur and consumers, both local and international. One of the main reasons is due to the highly successful operations of some well known names on the Internet, such as: eBay, Yahoo, Dell and Amazon. The Sales revenue of these companies shown in their annual reports is without doubt, one of the biggest factors why E-business is important in the commercial market nowadays (Vinsign, 2005).

Developing countries, especially in Africa, are not an exception in this revolution. In spite of this, they tend to lack the infrastructural, economic and socio-political framework for the development of E-business in comparison to developed countries for which Ghana is not an exception.

Small and Medium-sized Enterprises (SMEs) have grown in importance in the global economy during the last couple of decades. Both theoretical and practical economic business development literature acknowledges the key contributions of SMEs to the development of both national and international growth of economy. This fact is not only measured by the number of SMEs which represents nearly 90% of the total establishments across the world, but also their significant role in creating employment opportunities (Hall, 2002).
However, there is the challenge regarding whether there is enough information on the Web that is relevant and valuable for the average SME in a developing country that would make investment in Internet access feasible. Underlying this is the fact that most SMEs in developing countries cater for local markets and therefore rely heavily on local content and information. For this reason, there is a need to substantially increase the amount and quality of local content on the Internet to make it useful especially to low-income entrepreneurs (Wikipedia, 2002).

1.2. STATEMENT OF THE PROBLEM

E-business adoptions among Small and Medium enterprises (SMEs) in developed countries pose the advantage of reduced information search, and transaction costs. i.e. improving efficiency of operations – reducing time for payment, credit processing and the like. It also allows automatic packaging and distribution of information (including customized information) to specific target groups, just to mention a few (Catherine et. al., 2000).

However, developing countries in Africa and other parts of the world are still crawling to find their feet somewhere in this revolution of business. Very little have been done or researched on E-business adoption by SMEs operating in Ghana. This is what this study seeks to identify the level of e-business adoption by SMEs in Ghana using e-adoption model. Benefits and barriers in the adoption of e-business as well as identifying strategies for practical adoption would be worth considering. Also the research would find out the role of the government in promoting e-business in Ghana.
1.3. OBJECTIVE(S) OF THE STUDY

The main objective of this study is to use the e-business model to identify the level of e-business adoption among SMEs in Ghana and to use the same model develop a practical framework for adoption.

Specifically the objectives are:

1. To identify the level of E-business adoption among SMEs operating in Ghana using the e-adoption model.
2. To identify the benefits for adopting E-business among SMES in Ghana
3. Identify barriers affecting the growth of E-business in Ghana.
4. To assess the role of the Government towards the growth of E-business in Ghana.

1.4. RESEARCH QUESTIONS

• What is the level of e-business adoption by SMEs in Ghana?
• What are the benefits of adopting e-business by SMEs in Ghana?
• What are the barriers affecting E-business adoption by SMEs?
• To what extent is the role of the government towards e-business adoption in Ghana?
• What practical framework can be developed to promote e-business adoption in Ghana among SMEs?
1.5. RELEVANCE OF THE STUDY

The study seeks to offer SMEs in developing countries expand their market with the increased ability to transact directly with overseas or international customers and to advertise their goods and services online. This is especially true for small operators of tourism-related services. Tourism boards lend assistance in compiling lists of service providers by category on their Web sites.

In addition, for SMEs in developing countries the Internet will enable them offer a quick, easy, reliable and inexpensive means for acquiring online technical support and software tools and applications, lodging technical inquiries, requesting repairs, invoicing and ordering replacement parts or new tooling. In effect time and cost would be saved using the internet by SMEs in Ghana.

The Internet is also instrumental in enabling SMEs in developing countries to join discussion groups with their peers across the globe that are engaged in the same business, and thereby share information, experiences and even solutions to specific technical problems. This is valuable especially to entrepreneurs who are geographically isolated from peers in the same business.

Lately, the Internet is most commonly used by SMEs in developing countries for communication and research. The Internet is least used for E-business. E-mail is considered an important means of communication. It is typically the first step in E-business, as it allows
a firm to access information and maintains communications with its suppliers and buyers. This can then lead to more advanced E-business activities.

More so, this study when completed would serve as a guide for SMEs and stakeholders adopt a practical framework for E-business and develop a strategy for the adoption and growth.

This study seeks to enable SMEs in developing countries like Ghana be aware of economic, social and academic benefits of e-business

1.6. RESEARCH METHODOLOGY

The research is a field study and it is designed to collect data from Primary and Secondary sources. In respect of the primary sources, questionnaires and interviews will be conducted among sampled respondents selected from the research population to provide responses.

Secondary sources of data will be gathered from the Internet, Magazines, journals, books, newspapers etc.

The data collected will be analyzed using tables, figures and graphs which will require the use of Microsoft Excel.
1.7. SCOPE OF THE STUDY

The research focuses mainly on identifying E-business adoption level by SMEs using the Eadoption model at the Accra Mall of the Greater Accra Region of Ghana as a result of the easy access, and the cluster of the various sectors of SMEs operating.

Since the emphasis was on identifying the level of E-business adoption by SMEs, the study examines the benefits derived from E-business adoption as well as the barriers affecting SMEs in their adoption.

More so, the socio-economic factors such as electricity, access to Network, Internet Speed and affordability, lack of computers and technical support would not permit this research to be conducted in any SME anywhere in the Country.

1.8. LIMITATION

The technical nature of the study impose limits on the choice of the study area since data had to be available from a well organized Small and Medium Enterprise, hence fits into the parameters of E-business adoption model. This is why the study focused on the Accra Mall of the Greater Accra Region of Ghana.

The researcher encountered some problems in the data collection. Most of the respondents were too busy that they were not prepared to answer the questionnaires. Those who accepted
delayed in returning the questionnaires whilst some wanted refreshment package after spending some time with you.

Respondents were also not willing to disclose the type of systems i.e. software and how they work for reasons best known to them.

Transportation cost, cost of research material and cost of engagement of research assistants as well as cost of printing limited the researcher in choosing the sample size.

Other constraints associated with time such as academic assignments as well as the fact that the researcher is a full-time worker pursuing academic laurel were a hindrance to this research.

1.9. ORGANIZATION OF THE STUDY

The thesis is structured as follows. Chapter one considers Background to the study, statement of the problem, the research objective and questions, relevance, scope and limitation and organization of the study. Chapter two presents literature review on the areas of origin and conception of E-business, Awareness and E-readiness of E-business adoption by SMEs, Small and Medium Enterprises in Ghana, Benefits of E-business to SMEs, Barriers affecting E-business, implications of E-business adoption by SMEs to the Ghanaian economy and the role of the government in promoting ICT in Ghana. Chapter three discusses the methodology and instruments used in analyzing primary data gathered as well as the profile of the case study area and a proposed practical framework for adoption. Chapter four presents data analysis and interpretation as well as discussion of results and Chapter five gives a summary of the research findings, as well as a conclusion and recommendations based on the findings.
CHAPTER TWO

LITERATURE REVIEW

2.0. INTRODUCTION

Electronic business and its related activities over the internet can be the engines that improve domestic economic well-being through liberalization of domestic services, more rapid integration into globalization of production, and leap-frogging of available technology. Since E-business integrates the domestic and global markets from its very inception, negotiating on trade issues related to electronic business will, even more than trade negotiations have in the past, demand self-inspection of key domestic policies, particularly in telecommunications, financial services, and distribution and delivery. Because these sectors are fundamental to the workings of a modern economy, liberalization here will rebound to greater economic well-being than comparable liberalization in more narrowly focused sectors. Thus, the desire to be part of the E-business wave can be a powerful force to erode domestic vested interests that have slowed the liberalization of these sectors (Mann et. al., 2000).

Small and Medium sized Enterprises (SMEs) do play a major and important role in today’s world economy, and they are recognized as one of the main contributors to economic, development and employment growth. On the other hand, the revolution in Information technology (IT) and
communications changed the way people conduct business today. In recent years, increasing numbers of businesses have been using the Internet and other electronic media in conducting their marketing efforts, giving the chance for Electronic business which is a new phenomenon to grow in a very dramatic and dynamic way. Adopting E-business by Small and Medium enterprises can change both the shape and nature of its business all over the world. Because the increase usage of the Internet and other Electronic business tools (i.e.: E-mail, Intranets, Extranets and Mobile phones) in electronic transactions might create not only a lot of opportunity for small business enterprises but also can eliminate a lot of threats. From this perspective, it is noticed that the Internet, electronic media tools are playing a vital and essential role in conducting marketing activities within business enterprises regardless of its type or size (Nelson, 2000).

This research therefore intends to review various literatures on E-business adoption by Small and Medium Enterprises which forms about 90% of businesses in both developed and developing countries. In effect they are the engine of growth and hold about 70% of the working population in the world. The search considers e-business in general, benefits and barriers as well as its implication to SMEs in developing countries.

2.1. E-BUSINESS DEFINITION

Electronic business commonly referred to as "ebusiness" or "e-business", or an internet business, may be defined as the application of information and communication technologies (ICT) in support of all the activities of business (Wikipedia, 2011). It is the exchange of products and services between businesses, groups and individuals and can be seen as one of the essential activities of any
business. Electronic business focuses on the use of ICT to enable the external activities and relationships of the business with individuals, groups and other businesses. Electronic business methods enable companies to link their internal and external data processing systems more efficiently and flexibly, to work more closely with suppliers and partners, and to better satisfy the needs and expectations of their customers. E-business seeks to add revenue streams using the Web or the Internet to build and enhance relationships with clients and partners and to improve efficiency using various forms of E-business strategies (Wikipedia, 2011).

Wikipedia (2011), views E-business as a term used to describe businesses run on the Internet, or utilizing Internet technologies to improve the productivity or profitability of a business. In a more general sense, the term may be used to describe any form of business which utilizes a computer via the Internet. The most common implementation of e-business is as an additional, or in some cases primary, storefront. By selling products and services online, an e-business is able to reach a much wider consumer base than any traditional brick-and-mortar store could ever hope for. This function of e-business is referred to as ecommerce, and the terms are occasionally used interchangeably (Wikipedia, 2011).

Also, E-business (electronic business), derived from such terms as "e-mail" and "e-commerce," is the conduct of business on the Internet, not only buying and selling but also servicing customers and collaborating with business partners. One of the first to use the term was IBM, when, in October, 1997, it launched a thematic campaign built around the term. Today, major corporations are rethinking their businesses in terms of the Internet and its new culture and capabilities. Companies are using the Web to buy parts and supplies from other companies, to collaborate on sales promotions, and to do joint research. Exploiting the convenience, availability, and world-wide reach
of the Internet, many companies, such as Amazon.com, the book sellers, has already discovered how to use the Internet successfully (Nelson, 2000).

In brief, E-business is viewed as using technology to improve business processes. This includes managing internal processes such as human resources, financial and administration systems as well as external processes such as sales and marketing, supply of goods and services and customer relationships.

2.1.1 E-BUSINESS TOOLS AND ACTIVITIES

E-business involves business processes spanning the entire value chain: electronic purchasing and supply chain management, processing orders electronically, handling customer service, and cooperating with business partners. Special technical standards for E-business facilitate the exchange of data between companies. E-business software solutions allow the integration of intra and inter firm business processes. E-business can be conducted using the Web, the Internet, intranets, extranets, or some combination of these.

More often e-business activities can be classified as Business to Business (B2B), Business to Consumer (B2C), Business to Government (B2G) and Government to Consumer (G2C). Also activities using E-business tools include:

- Trading of goods or services online, such as e-Procurement, primarily through websites.
- Electronic retailing (e-Tailing)
- Use of the internet, intranets or extranets to conduct research and manage business activities
- Web site marketing
Online communications, such as email
Online training for staff such as E-learning (Wikipedia, 2011).

E-business can sometimes be categorized under four main areas of activities: Business to Business (B2B), Business to Government (B2G), Business to Consumer (B2C) and Consumer to Consumer (C2C) (Wikipedia, 2011).

2.2.0. SMALL AND MEDIUM ENTERPRISES IN GHANA

There is a growing recognition of the role of small and medium enterprises (SMEs) in economic development. They are often described as the engine of growth and prolific job creators. Even in the developed industrial economies, it is the SME which has the largest employer of workers rather than the multinationals (Mullineux, 1997).

Interest in the role of SMEs in the development process continues to be in the forefront of policy debates in most countries. Governments at all levels have undertaken initiatives to promote the growth of SMEs (Feeney and Riding, 1997).

SMEs represent over 90% of private business and contribute to more than 50% of employment and of GDP in most African countries (UNIDO, 1999). Small enterprises in Ghana are said to be a characteristic feature of the production landscape and have been noted to provide about 85% of manufacturing employment of Ghana (Steel and Webster, 1991; Aryeetey, 2001). SMEs are also
believed to contribute about 70% to Ghana’s GDP and account for about 92% of businesses in Ghana. SMEs therefore have a crucial role to play in stimulating growth, generating employment and contributing to poverty alleviation, given their economic weight in African countries.

The issue of what constitutes a small or medium enterprise is a major concern in the literature. Different authors have usually given different definitions to this category of business. SMEs have indeed not been spared with the definition problem that is usually associated with concepts which have many components. The definition of firms by size varies among researchers. Some attempt to use the capital assets while others use skill of labour and turnover level. Others define SMEs in terms of their legal status and method of production.

Storey, (1994) tries to sum up the danger of using size to define the status of a firm by stating that in some sectors all firms may be regarded as small, whilst in other sectors there are possibly no firms which are small. The Bolton Committee (1971), first formulated an ‘economic’ and ‘statistical’ definition of a small firm. Under the ‘economic’ definition, a firm is said to be small if it meets the following criteria:

• It has a relatively small share of their market place;
• It is managed by owners or part owners in a personalized way, and not through the medium of a formalized management structure;
• It is independent, in the sense of not forming part of a large enterprise.

Under the ‘statistical’ definition, the Committee proposed the following criteria:

• The size of the small firm sector and its contribution to GDP, employment,
exports, etc.;

- The extent to which the small firm sector’s economic contribution has changed over time;

- Applying the statistical definition in a cross-country comparison of the small firms’ economic contribution.

The Bolton Committee applied different definitions of the small firm to different sectors.

Whereas firms in manufacturing, construction and mining were defined in terms of number of employees (in which case, 200 or less qualified the firm to be a small firm), those in the retail, services, wholesale, etc. were defined in terms of monetary turnover (in which case the range is 50,000-200,000 British Pounds to be classified as small firm). Firms in the road transport industry are classified as small if they have 5 or fewer vehicles. There have been criticisms of the Bolton definitions. These centre mainly on the apparent inconsistencies between defining characteristics based on number of employees and those based on managerial approach. The European Commission (EC) defined SMEs largely in term of the number of employees as follows:

- 1 to 9 employees - micro enterprises;

- 10 to 99 employees - small enterprises;

- 100 to 499 employees - medium enterprises.

Thus, the SME sector is comprised of enterprises (except agriculture, hunting, forestry and fishing) which employ less than 500 workers. In effect, the EC definitions are based solely on employment
rather than a multiplicity of criteria. Secondly, the use of 100 employees as the small firm’s upper limit is more appropriate, given the increase in productivity over the last two decades (Storey, 1994).

Weston and Copeland (1998), hold that definitions of size of enterprises suffer from a lack of universal applicability. In their view, this is because enterprises may be conceived of in varying terms. Size has been defined in different contexts, in terms of the number of employees, annual turnover, industry of enterprise, ownership of enterprise, and value of fixed assets.

Van der Wijst (1989) considers small and medium businesses as privately held firms with 1 – 9 and 10 – 99 people employed, respectively.

Jordan et al (1998) define SMEs as firms with fewer than 100 employees and less than €15 million turnover.

Michaelas et al (1999) consider small independent private limited companies with fewer than 200 employees and López and Aybar (2000) considered companies with sales below €15 million as small. According to the British Department of Trade and Industry, the best description of a small firm remains that used by the Bolton Committee in its 1971 Report on Small Firms. The UNIDO also defines SMEs in terms of number of employees by giving different classifications for industrialized and developing countries. The definition for industrialized countries is given as follows:
• Large - firms with 500 or more workers;

• Medium - firms with 100-499 workers;

• Small - firms with 99 or less workers.

• The classification given for developing countries is as follows:
  • Large - firms with 100 or more workers;
  • Medium - firms with 20-99 workers;
  • Small - firms with 5-19 workers;
  • Micro - firms with less than 5 workers.

It is clear from the various definitions that there is not a general consensus over what constitutes an SME. Definitions vary across industries and also across countries. It is important now to examine definitions of SMEs given in the context of Ghana.

There have been various definitions given for small-scale enterprises in Ghana but the most commonly used criterion is the number of employees of the enterprise (Kayanula and Quartey, 2000). In applying this definition, confusion often arises in respect of the arbitrariness and cut off points used by the various official sources. In its Industrial Statistics, the Ghana Statistical Service (GSS) considers firms with fewer than 10 employees as small-scale enterprises and their counterparts with more than 10 employees as medium and large-sized enterprises. Ironically, the GSS in its national accounts considered companies with up to 9 employees as SMEs (Kayanula and Quartey, 2000). The value of fixed assets in the firm has also been used as an alternative criterion for defining SMEs. However, the National Board for Small Scale Industries (NBSSI) in Ghana applies both the International
Research Journal of Finance and Economics — “fixed asset” and number of ‘employees’ criteria. It defines a small-scale enterprise as a firm with not more than 9 workers, and has plant and machinery (excluding land, buildings and vehicles) not exceeding One Thousand Ghana Cedis (GH₵1,000.00). The Ghana Enterprise Development Commission (GEDC), on the other hand, uses a Ten Thousand Ghanaian Cedis (GH₵10,000.00) upper limit definition for plant and machinery. It is important to caution that the process of valuing fixed assets poses a problem. Secondly, the continuous depreciation of the local currency as against major trading currencies often makes such definitions outdated (Kayanula and Quartey, 2000).

In defining small-scale enterprises in Ghana, Steel and Webster (1991), and Osei et al., (1993) used an employment cut-off point of 30 employees. Osei et al., (1993), however, classified small-scale enterprises into three categories. These are:

- micro - employing less than 6 people;
- very small - employing 6-9 people;
- Small - between 10 and 29 employees.

A more recent definition is the one given by the Regional Project on Enterprise Development Ghana manufacturing survey paper. The survey report classified firms into:

- micro enterprise, less than 5 employees;
- small enterprise, 5 - 29 employees;
- medium enterprise, 30 – 99 employees;
- Large enterprise, 100 and more employees (Teal, 2002).
2.3.0. AWARENESS AND E-READINESS OF E-BUSINESS BY SMEs

Information and communication Technology (ICT) is changing almost everything that is around us. New business opportunities are opening to those who can make effective use of ICT both locally and internationally. As the Internet and its applications including the World Wide Web and e-mail, have evolved, it is evident that digital technologies are transforming the way in which international trade and communications are conducted. These changes originated in the developed world, in North America and Europe, where the Internet and its related information technologies (IT) were developed, but have been taken up by virtually every country in the world (Wikipedia, 2007).

SMEs have insufficient knowledge of information technology and E-business. Many SMEs have identified their lack of knowledge of technology as one of the main barriers to using E-business. Government and private sector partnerships can engage in a campaign to disseminate information to SMEs about e-business policies, best practices, success stories, and opportunities and obstacles relating to the use of ICTs and e-business. These awareness campaigns could include free training courses and workshops on e-business, security and privacy, awards programs, and information centers to assist SMEs. Ultimately, this information campaign should come in the form of an overall e-business development strategy for the economy, focusing on its various innovative applications for SMEs (Wikipedia, 2007).

A "digital divide" now exists between technologically developed and developing countries, as well as between populations within countries, and between genders and age groups
worldwide (Okpaku, 2001). The readiness of SMEs on the adoption of e-business will be effective if the country’s infrastructure on ICT is adequate enough and spans through the length and breadth of the country. The following are the indicators as to whether they are e-ready for e-business adoption.

2.3.1. Network Access

The minimum necessary condition for Readiness is access to adequate network infrastructure. Without access to global communications networks, no community can participate in the Networked World. Access is determined by a combination of the availability and affordability of use of the network itself, as well as of the hardware and software needed for network interface. The quality and speed of the network are also important in determining how the network is used. The customer service orientation of access providers is a major factor in network application adoption and usability (Opaku, 2001). In 1998, Ghana was introduced to Internet by Network computer Systems, the first on the market, followed by African online and Ghana Internet Services. Ten years afterwards Ghana has witnessed acceleration in the network access as a result of the improvements in the Telecommunication services. Today internet access can be obtained in the length and breadth of Ghana where mobile telecommunication services are available (Obeng, 2004).

2.3.2. Information Infrastructure:

This component measures the penetration of fixed and mobile services into the community. As discussed above, Ghana is showing a rapid growth to basic access to information infrastructure.
Ghana is in the situation where mobile connectivity already substantially outstrips fixed line telephony, despite the substantially higher costs of mobile services. There are indications that Ghana would be nearing maturity in the urban areas when Globalcom network introduces glo-1 network which is from Portugal to Ghana and Nigeria (Okpaku, 2001).

2.3.3. Internet Availability:

Ghana was amongst the first countries in Africa to achieve connection to the Internet. The rapid growth in this sector in recent years is set to continue in 2006. National and international public data services are provided by more than 20 companies and there are more than 50 VSAT networks operating in the country. Almost 100 new Internet Service Providers (ISPs) were licensed in 2004 alone, bringing the total to more than 140. Broadband ADSL services were introduced in 2003. The government is committed to continuing the privatization of the national carrier, Ghana Telecom, as well as the fibre network of Voltacom, the country’s electricity company. The full legalization of VoIP telephony and the implementation of Broadband over Power lines (BPL, PLC) are other key developments expected in 2006 (Obeng, 2004).
2.3.4. Internet Affordability:

The high cost of internet services and products is leaving majority of Ghanaians out of the enormous opportunities and benefits that the technology offers in education, governance, commerce and research. The production, packaging and manner of distribution of internet services make the technology expensive.

And internet services are expensive because Ghana has no nation-wide telecommunication backbone for data network which makes accessing and broadcasting bandwidth for the industry a big challenge (Dogbevi, 2009).

The World Trade Organizations Basic Telecommunication Services Agreement (BTA) of 1998 also played a catalytic role. Some countries like Ghana responded and liberalized all their telecom market segments. Ghana liberalized her long haul, PSTN and ISP market segments. This brought competition to Intelsat in the satellite space, Ghana Telecom in the PSTN segment and introduction of ISPs (new operators) in the Internet access market. Despite this liberalization and competition in the Ghana telecommunications market the fact still remains that Internet is more expensive than the average working Ghanaian can afford (Osiakwan, 2004).

2.3.5. Network Speed and Quality:

The use of the latest technology is narrowing the gap between developed and developing countries in this aspect. Microwave, fibre optic and sophisticated network management tools all contribute to a great improvement in quality of both the network and the maintenance thereof in all areas where
these technologies are deployed. Ghana has installed fully digital backbone networks and making increasing use of Wireless Local Loop. In future one can expect network quality to be good wherever it does not rely on older technologies.

Ghana has been ranked number one in Africa for Internet speeds, thanks to Vodafone Ghana’s launch of its 4MB speed capacity, which is West Africa’s fastest consumer Internet cafés broadband package.

Aside being ranked number one in Africa, Ghana has also moved from the 176th position, globally, to 52nd for downloads and 11th for uploads, according to SpeedTest.net, an independent global broadband speed test analyzer, powered by Okla the global leader in broadband speed testing and web-based network diagnostic applications (VibeGhana, 2010).

2.3.6. Hardware and Software:

South Africa has a competitive and dynamic market for locally assembled PC’s and specialized microprocessor manufacturing whilst Ghana import all PCs and its accessories from abroad. Hardware and software components are expensive in Ghana which is serving as a hindrance to the growth of ICT in Ghana (Obeng, 2004).
2.3.7. Service and Support:

The move away from physical fixed line installations to either mobile or fixed wireless connections means that most aspects of telecommunications service have improved. The lack of a skilled base of technicians, programmers and developers in Ghana and especially in other parts of Africa means, however, that those countries are highly reliant on outside support. For instance the corporate organizations and government continues to call on foreign developers and programmers for its social services computer applications and systems maintenance (Obeng, 2004).

2.4.0. WHAT IS A MODEL?

A model can come in many shapes, sizes and style. It is important to emphasize that a model is not the real world but merely a human construct to help us better understand real world systems. In general all models have an information input, an information processor and an output of expected results. Some key features in common with the development of any model are that: simplifying assumptions must be made; boundary conditions or initial conditions must be identified; the range of applicability of the model should be understood (Wikipedia, 2011).
A business model is simply a working description that includes the general details about the operations of a business. The components that are contained within a business model will address all functions of a business including such factors as the expenses, revenues, operating strategies, corporate structure and sales and marketing procedures. Generally, anything that has to do with the day to day functionality of the corporation can be said to be part of the business model. According to Timmers (1998), a business model is architecture for the product, service and information flows, including a description of the various business actors and their roles; a description of the potential benefits for the various business actors; and descriptions of source of revenues (Timmers, 1998).

The concept of e-business model does not differ from Business model but use of the online presence. The following are some of the most adopted e-business models, e-shops, e-commerce, e-procurement-malls, e-auction, virtual communities, value chain integrators and others (Wikipedia, 2010).

2.4.1. STAGE MODEL / THE EADOPTION LADDER

The business benefits from implementing the correct information and communication technology (ICT) solutions for your business can be immense, but choosing which solution to use and when to implement them is not a simple task. It would appear that there are thousands of solutions and hundreds of providers supplying proprietary versions of those solutions. So which do you choose and when do you implement them. The stage model or the eadoption ladder model as the name
implies is well known in academia and practice to be a dynamic eadoption model for efficient and systematic implementation of a model. The stage model has varying purposes but in general terms they bear the basic features in common. All divide the development of e-business in several stages; all of them bear a deterministic characteristic in describing a development from a simple information service to a more refined one shop business. The concept of stage models was originally founded to discuss the adoption and maturity of information systems management strategies from the operational level to the strategic level of the organization (Nolan, 1973). The concept of modeling later came to use in other fields of technology adoption such as intranet adoption among others (Damsgaard, 2000).

In the area of e-business research there has been a large number of variants of the stage model concepts presented by various sources. Some models originate in the research community and other originates from the practice field (Goldkuhl, 2006).

2.4.2. KINDS OF STAGE MODEL ADOPTED

2.4.2.1. ANAO model

This model is developed by the Australian National Auditing Office to categorize the government agencies electronic service delivery via the Internet. This model divides the delivery of services into 4 categories or stages, indicating that this is a model pivoting the emerging e-services and the
development of e-services. The purpose of this model is to be the basis of auditing work conducted by this organization and to help government agencies in finding what services to deliver online (ANAO, 2000).

**Stage 1: Publishing information** is providing static information about the agency and downloadable and readable publications from the agency to the users are the pivoted and focused issues. Access to information is not limited. Interaction between user and e-service are limited to an inquiry and search functionality.

**Stage 2: Interaction** involves limited interaction possibilities in government agency databases to the users. This is done with expanded search and filtering possibilities as well as calculation services for calculating, debts or levels of government subsidies. There is still no limitation regarding accessibility to the site and services.

**Stage 3: Transaction of secure information** requires secure identification related to the individual interacting with the government agency. Data access is restricted to a specific individual who is provided personal information and services. The providing of personal information requires a higher level of secure channels between agency and the user. Example services are retrieving cargo import information, and lodgment of tax returns. Creating services on this stage involves addressing risks involving security, privacy and financial transactions. What separates this stage from the two prior stages is the need for secure identification of the user identity.

**Stage 4: Sharing information with other agencies** covers the exchange of information between different government agencies regarding a specific user (a business, and organization or an individual). ANAO exemplifies this with an agency notified of a change of address, a bit of information of interest for all government agencies involved in providing services to this individual. This information is to be shared with these other agencies. As in stage 3 this exchange of
information need the user to be identified to make sure that the information provided and spread is correct (ANAO, 2000).

2.4.2.2. SAFAD model

The Swedish Agency for Administrative Development (SAFAD; in Swedish Statskontoret) has presented a stage model, which is highly influenced by the Australian model. The SAFAD model is based on the assumption that technology and service levels are intimately interwoven factors in the emerging e-Government services. As in the Australian model there are diagonal stages apparent that according to SAFAD are clearly distinct from each other in functional terms.

Stage 1: Information pivots on the presentation of static material such as publications and information about the services provided by the agency. SAFAD describes this information as “packaged” by the agency with only limited possibilities to interact with the website. This functionality is basically limited to search and inquiry as in the Australian model above. According to SAFAD this stage include services such as presenting the mission of the agency, parliament bills relating the services of the agency and providing mail access for inquiries.

Stage 2: Interaction is according to SAFAD providing “interactive information”. This includes the possibility for basic interaction with the website. At this stage services as searching in agency databases, ordering printed publications, downloading and ordering forms relating agency services and subscribing to newsletters from the agency. This stage range from completely public services
such as searching in databases to basic identification of the client that is limited to email addresses or mail addresses.

**Stage 3: Transaction** includes picking up and leaving personal information related to the services provided by the agency. This includes initiating and following agency specific services by the agency. To be able to provide this type of services online the client need to be securely identified. This stage ranges from initiating a simple case with identification of the client to more advanced transactions such as tax declaration online.

**Stage 4: Integration** addresses the integration of services between government agencies. This is the realization of a one-stop government that regardless of organizational boundaries provides services at one point of entry even where several agencies are involved. Addressed at this stage is the complete process of a service provided online, from initiating the case to paying the service, tax or what the service is about online. This mean that the organizational boundaries in the government structure is somewhat erased or is left with no or little visibility to the clients (Statskontoret, 2000).
2.4.2.3. Layne & Lee model

This model is derived from observations on the evolving e-Government in the United States. Although the model is derived from research and experiences from a federal government structure it can be used on other government structures as well. Layne and Lee (2001) state that the model (and the related discussion) initiate from the state level but can be used on federal as well as local level. Layne and Lee see the development of government agencies as a natural progress in which the agency evolves because of and in response to functionality needs and citizen expectations. In the realization of these four stages the result will be true one-stop shopping for the citizens.

Stage 1: Catalogue focuses on establishing an online presence for the government agencies. This includes the efforts of many government agencies in the basic web development of presenting information about the agency and publications made at the agency. According to Layne and Lee the movement into this stage is initiated because of external pressure in terms of citizen and business expectations. The name of this stage, catalogue, is derived from the typical functionality that is afforded by the agency. The agency will at this stage publish documents and information that is of general nature. This is information in general terms about the agency and its services. At the end of this stage the agency will address the need for an organized portal site that present the published documents and information in a structured and usable way.
Stage 2: Transaction according to Layne and Lee represents a focus shift towards integrating the internal systems in the agency with the website. In doing this the agency will allow the clients to interact with personal information in transaction-based services provided by government agency. This stage will allow citizens to renew licenses and pay fines online in integration with agency internal systems. The end of this stage will according to Layne and Lee be focused on the full integration of agency systems with the web interface allowing the transactions between client and agency to be posted directly into the agency systems minimizing the interaction with agency staff.

Stage 3: Vertical integration and the last stage are based on the distinction between government functions and government levels. The vertical integration addresses the integration between different levels of government but in the same functional areas. Layne and Lee exemplifies this with the integration of local level business license application being linked to state and government level to obtain an employer identification number. In other words this stage will consist of the linking of local level systems to higher-level systems.

Stage 4: Horizontal integration focuses on the integration of information systems in government agencies with different functionality that has some relation in common to the clients. An example of horizontal integration is the possibility to pay different business fees and taxes to different agencies at the same time because of the integration of these systems in the different agencies (Layne et. al., 2001).

2.4.2.4. Hiller & Bélanger model
This model by Hiller and Bélanger (2001) differ from the models above in adding a fifth stage stating the importance of political participation. This is a clear distinguishing aspect that single out this model among the presented models.

Stage 1: Information is according to Hiller and Bélanger the most basic form of e-Government, where information is simply posted on the agency website. These information websites contain general information about services provided by the agency and information directed towards the public including businesses, politicians or other government agencies. The biggest challenge is to maintain the quality of information to ensure that the information is updated and accurate. This stage is implemented to a high degree in the government agencies.

Stage 2: Two-way communication is when government agencies allow users to interact with the agency in simple requests. According to Hiller and Bélanger this is often the case of email services provided by the agency. This stage includes services as requesting information from the agency or requesting the government agency to send back personalized services via mail or email. Hiller and Bélanger exemplify this as applying for new Medicare cards or benefit statements from the government.

Stage 3: Transaction is when government agencies provide the possibility to interact with the agency and to conduct transactions completely online. According to Hiller and Bélanger this is the most advanced level of e-Government widely available. Services at this stage can be renewing licenses for businesses and individuals and paying fines and taxes online. At this stage public servants are replaced at large extent by the possibility for clients to conduct self-services online.

Stage 4: Integration contains the integration of government services. This can and is most frequently done with a single portal allowing clients to access services at a single point of entry. By using a single point of entry clients can access services at one place no matter what agency that
actually offers them. One of the biggest obstacles according to Hiller and Bélanger are the lack of integration of back-office systems between government agencies. Integration of back-office systems and online services could mean saving a lot of time and resources for the government agencies involved.

Stage 5: Political participation, the last stage of the model, contains political participation and includes services such as voting online and posting comments online. Hiller and Bélanger argue that although this can be seen as a part of stage 2, two-way interaction, the importance of the political dimension motivate a separate category or stage for this type of services. Currently there are very few services available that fall into this category. The uniqueness of the privacy and security concerns in this stage is one of the main factors behind stating this as a separate category. In the future of transaction-based e-Government include the possibility of voting online (Hiller et.al., 2001).

2.5.0. OVERVIEW OF E-ADOPTION LADDER MODEL

Anukis (2009), e-adoption ladder suggests sensible, bite-size that allow businesses to spread cost and risk of ICT investment and enables them to achieve maximum return on investment (ROI). It is one method for planning correct and efficient investment in ICT. It allows businesses to decide what you need now, for the future and how to ensure today’s foundation support tomorrow’s improvement.
Stage 1 Efficient Internal and External Communications. This seeks to find out how you communicate in terms of telephony (or IP Telephony), email, Instant messaging, text messaging and faxing. Internal communication may also mean communicating with outlying or remote offices.

Stage 2: Efficient Internal Collaboration. How your company works on projects or process that cross departmental or geographical boundaries. Can you work effectively on, for example, important documents; or does everyone struggle to know which the most recent version of that important file is?

Stage 3: Place in the worldwide Market.

Ensure your customers know you exist and that they can easily find out information about you.

Stage 4: Sell Online. Sell your products online and make them available to your customers in a format making searching and querying easy to find.

Stage 5: Integrated Supply Chain Management. The ability to liaise and collaborate with your suppliers electronically. Where possible, systems are automated such that your systems talk to their systems automatically.

Stage 6: Open Systems Integration. Integrate your systems with other, external systems electronically. Make and receive payments to, for example, the Inland Revenue and your employees.

Whilst the adoption Ladder provides guidance and a logical process for implementing ICT in your business, it does not have to be strictly adhered to. Some small retail businesses need a Place in the worldwide market more than they need Efficient Internal and External Communications. (Anukis, 2009)
Table 2.1. THE E-ADOPTION LADDER

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
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<tbody>
<tr>
<td>Stage 6</td>
<td>Open systems Integration</td>
</tr>
<tr>
<td>Stage 5</td>
<td>Integrate supply chain Management</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Sell online</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Place in the Worldwide market</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Efficient Internal collaboration</td>
</tr>
<tr>
<td>Stage 1</td>
<td>Efficient Internal and External communications</td>
</tr>
</tbody>
</table>

Source: adapted from Anukis (2009).

According to Roe (2007), the e-adoption ladder should incorporate dynamisms due to constantly changing nature of technology and also to be able to address the recurring criticism of the e-adoption ladder. Another model, the e-adoption typologies which describes key characteristics that determines technology adoption a business thinks about its ICT. The defining characteristics are agile, competitive and successful businesses are integrating technology across their business process and improving performance. This new approach continue to share many similarities with the ladder but seeks to move the debate forward looking beyond an approach that historically has simply focused on an examination and cataloguing of discrete ICT application.
Table 2.2 E-ADOPTION TYPOLOGIES

<table>
<thead>
<tr>
<th>E-ADOPTION TYPOLOGIES</th>
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<tbody>
<tr>
<td>Non –Adopters</td>
</tr>
<tr>
<td>Basic Connectors</td>
</tr>
<tr>
<td>Advanced Connectors</td>
</tr>
<tr>
<td>Strategic adopters</td>
</tr>
</tbody>
</table>


2.5.1. FACTORS THAT AFFECT THE E-BUSINESS ADOPTION MODEL

According to Pouloudi (2002), there are five factors that impact on e-business adoption model known as the e-factors. They are Technical, Individual, Organizational, Industrial and Societal.
2.5.1.1. Technical

The advent of Information and Communication Technologies (ICT) enables the development of new e-business models. The technological advancements open additional possibilities for collaboration with distribution and supply partners, for participation in virtual trading communities or dynamic virtual organizations, and for extending classic value chains to value networks. Technological factors are more or less externally indicated, and the company itself must consider them as factors in different business models which are closely dictated by external factors, like the state of technological development, user preferences and expectations, competitive environment (Pouloudi, 2002).

2.5.1.2. Individual

User acceptance concerns both customers and employees that utilize e-business. The Individual factor deals with the individual at a micro level and provides valuable insight into the mental processes that influence an individual’s decision-making. However, these mental processes are not easy to decipher. It is not surprising therefore that literature lacks a coherent and comprehensive map of an individual’s behavioral patterns in respect to technology acceptance and adoption as well as e-business acceptance and adoption. Some of the most important factors affecting the latter are: Geographic, Culture, Education and Experience, Transactional, Psychological, Behaviour, Individual Differences (cognitive and physical), and Demographic (Pouloudi, 2002).
2.5.1.3. Organizational

Quite often, as most R&D projects’ primary concern is the development of a new product, service, or even part of a basic technical and business infrastructure, the change impact of the development efforts is not sufficiently addressed. Such organizational impact is manifested in changes in the nature and structure of work at the intra- and inter-organizational levels, and creation of new types of communities (among users, partners, facilitating agencies). The main categories of organizational e-factors have stemmed from a list of possible reasons of business model studies and include: Product Characteristics, Management and Structure, Market and Customers, Resources and Capabilities, Partnerships, Efficiency, and Organizational Culture (Pouloudi, 2002).

2.5.1.4. Industrial

Adoption of e-business models is influenced by industry structure and vice versa. However, not every industry faces the same changes in structure due to e-business. The amount of Internet usage within an industry sector is not only reflected in the nature of the product (e.g. digitized products such as music, books and software that are easier to sell and distribute over the Internet) but also on consumer tastes and habits. The latter can often differ across different market environments and across time through the evolution of industrial structures, markets and consumer orientations. In general, we witness a trend where the boundaries of industries (e.g. the telecommunications industry, retail, finance, media, entertainment, publishing), as we know them, are blurring and networks of organizations, so called value webs, are replacing individual business units. Moreover, within new business models, organizations from different industries collaborate in partnerships to deliver customized products and services. Generally, the industrial factors that affect an e-business
model adoption are: Product Characteristics, Type of Industry, Suitable Cooperation Partners, Competition, Industry Structure, and Customers (Pouloudi, 2002).

2.5.1.5. Societal

As new e-business models lead to new business practices they will affect work and consequently employment. Analysis of new skills and capabilities is required. To focus on dynamic capabilities that emerge from new business models and define new methods of work, there is a need to investigate the evolution of knowledge workers and consequently implications on employment. Effective e-business practices will give companies exposure and access to global markets. The transfer of knowledge necessary for the companies to make the right steps ahead is required, through a training program in e-Business best business cases and implementation approaches. Moreover, the fast changing world of the information society creates vast educational requirements for new graduates and for the re-training of the existing workforce. The availability of online e-management education programmes seems to become very important for the adoption of e-business models. Finally, issues of regulation and policy are critical, facilitating the harmonization of work practices and business effectiveness in different parts of Europe, where e-commerce adoption is still at different stages of maturity. Consequently, the factors that relate to the adoption of e-business models and affect people in both their work and social environment are: Geographic, Cultural, Economic, Legal /Regulation, Ethical and Professional, Social Capital / Social Network, and Social Structure (Pouloudi, 2002).
E-business proved its importance based on the fact that time is essence. Time plays an important role to both the business and consumers. From the business perspective, with less time spent during each transaction, more transaction can be achieved on the same day. As for the consumers, they will save up more time during their transactions. As a result of this, E-business adoption would replace the traditional commerce method where a single transaction can cost both parties a lot of valuable time. With just a few clicks in minutes, a transaction or an order can be placed and completed via the internet with ease. For instance, a banking transaction can be completed through the Internet within a few minutes compared to the traditional banking method which may take up to hours. This fact obviously proves that E-business is beneficial to both business and consumer wise as payment and documentations can be completed with greater efficiency (Vinsign, 2005).

Another benefit is that, E-business is cost effective compared to traditional commerce method. This is as a result of removal or sizing the number of middlemen in a product. One example is the giant computer enterprise, Dell build to order practice where ordering can be made direct from the manufacturer via the internet and the products delivered without third parties which most of the time increases the price of the product. Aside from that, marketing for E-business can achieve a better customer to cost ratio as putting an advertisement on the internet is comparably much cheaper than putting up a roadside banner or filming a television commercial. For E-business, the total overheads needed to run the business is significantly much less compared to the traditional commerce method.
The reason is due to the fact that most of the cost can be reduced in E-business. For example, in running an E-business, only a head office is needed rather than a head office with a few branches to run the business. In addition to that, most of the staff, maintenance, communications and office rental can be substitute by a single cost, web hosting for the E-business.

To both the consumers and business, connectivity plays an important part as it is the key factor determining the whole business. From the business point of view, E-business provides better connectivity for its potential customer as their respective website can be accessed virtually from anywhere through Internet. This way, more potential customers can get in touch with the company’s business and thus, eliminating the limits of geographical location. From the customer standpoint, E-business is much more convenient as they can browse through a whole directories of catalogues without any hassle, compare prices between products, buying from another country and on top of that, they can do it while at home or at work, without any necessity to move a single inch from their chair. Besides that, for both consumers and business, E-business proves to be more convenient as online trading has less red tape compared to traditional commerce method (Ako, 2001).

In global market sense, the appearance of E-business as a pioneer has opened up various windows of opportunities for a variety of other companies and investors. For instance, due to the booming of E-business, more and more resources are being directed into electronic securities, internet facilities, business plans and new technologies. In result of this phenomenon, a variety of new markets have emerged from Ecommerce itself giving a boost to the global market (Bynoe, 2002).

According to Bynoe (2002), the following are the benefits of business.
2.6.1. Removes Location and Availability Restrictions: Users need not be in the same physical location as an e-business and the exchange of information and transactions may take place at any given time, twenty-four hours a day, seven days a week and from any location in the world with Internet access. A physical location is restricted by size and limited to only those customers that can get there, while an online store has a global marketplace with customers and information seekers already waiting in line.

2.6.2. Reduces Time and Money Spent: In e-business, there is often a reduction in costs required to complete traditional business procedures. Many of those same traditional business approaches can be eliminated and replaced with electronic means, which are often easier to carry out as well as easier on the pocketbook. For example, compare the cost of sending out 100 direct mailings (paper, postage, staff and all), to sending out a bulk e-mail. Also think about the cost of paying rent at a physical location opposed to the cost of maintaining an online site.

2.6.3. Heightens Customer Service: With e-business customers receive highly customizable service, and communication is often more effective. There is far more flexibility, availability and faster response times with online support. For example, think about the speed of e-mail inquiries and live chat as opposed to getting on the phone, especially when that business is closed for the day. There is also a faster delivery cycle with online sales, helping strengthen the customer/business relationship. The internet is a powerful channel for reaching new markets and communicating information to customers and partners. Having a better understanding of your customers will help to improve customer satisfaction.

2.6.4. Gives a Competitive Advantage: The internet opens up a brand new marketplace to businesses moving online. Competition via the internet is growing as the internet itself grows and waiting too long to move online may cause you to lose your place in line entirely. Easy access to real
time information is a primary benefit of the internet, enabling a company to give more efficient and valid information and helping to gain the competitive advantage over those that are not online.

According to Kidd (2001), E-business is capable of delivering these benefits. Business of all sizes in all sectors are using the Internet in many different ways - to work with partners and suppliers, for procurement, for internal activities such as knowledge sharing and new product development, and much more. Companies such as United Technologies, J. Sainsbury, General Electric and many others are reporting benefits from the use of the Internet. These benefits include:

- improved speed of response;
- cost savings;
- improved communications, information and knowledge sharing;
- reductions in inventory;
- improved efficiency and productivity;
- harmonization and standardization of procedures;
- better transfer of best practices;
- acquisition of new customers and increased sales;
- Improved customer service.

However the benefits are achieved not by technology (which is an enabler) but by addressing strategy, technology, organization, people and business processes as an integrated whole and making change to all these dimensions. The Internet is just like other information technologies - change management, good implementation practices and clear business objectives are required in order to reap the full benefit (Wikipedia, 2011).
2.7.0. BARRIERS TO E-BUSINESS ADOPTION BY SME

In general, E-business adoption works differently according to the culture and the organizational type. According to OECD (2004), lack of applicability to the business preferences for established business models, unsuitability for the type of business; enabling factors such as availability of ICT skills, qualified personnel, network infrastructure; cost factors such as ICT equipment and networks, software and re-organization security and trust factors which includes security and reliability of e-business systems, uncertainty of payment methods, legal framework and intellectual property right) and challenges in areas of management skills, technological capabilities productivity and competitiveness (OECD, 2004).

According to Kapurubandare (2006), owners or managers of SMEs are the decision makers for their organization and for that matter taking decisions in connection with internet adoption for expansion becomes quite a challenge as a result of lack of awareness of the technology and perceived benefits in taking up the decision. Also lack of knowledge on how to use the technology and perceived benefits is a major factor that the owners lack to take up to e-business. The low computer literacy is other contributory factor for not adopting e-business. (Kapurubandare, 2006)

Mistrust of the information technology industry and lack of time are two other factors that affect the decision to adopt e-business. Most SMEs are concerned about a return on investments and for that matter reluctant to make substantial investments particularly when short term returns are not
guaranteed. This is as a result of the limited resources such as financial, time, and personnel (Cavaye et al., 1999).

Similar to e-business benefits, literature is also silent about whether barriers differ based on organizational size. In general, the following major barriers are identified:

A lack of time to implement e-business (Scupola, 2009), the high level of complexity associated with e-business implementation (Kaynak et al., 2005) and high implementation cost associated with e-business technologies (Tan et al., 2010).

It is argued that many of these barriers can be successfully addressed by large organizations due to their resource and expertise availability. As SMEs suffer from acute resource scarcity, the perceived barriers of e-business technologies adoption by SMEs may differ considerably than those of large organizations. As such, some researchers examine the barriers perceived by SMEs for introducing e-business technologies. According to these scholars, SMEs encounter several barriers cited in the broader SME literature. However, there is a disagreement about some barriers. For instance, lack of management willingness to engage in e-business to be a major barrier for SME context. But Li and McQueen, (2008) provide opposite findings. Some scholars acknowledge that barriers to e-business technologies adoption among SME buyers and suppliers may differ. For example, Grover and Ramanlal (1999) reported that the barriers to adoption of e-business technologies between buyers and suppliers have not yet been untangled. Furthermore, it is unclear whether these barriers have significant influence on e-business technologies adoption decision making or implementation stages (Tan et al., 2010).

2.8.0. IMPACT OF E-BUSINESS ON SMEs
There's no doubt the adoption of Web technology provides a company the opportunity to change its relationships with the organizations and individuals with which it does business--from trading partners to suppliers, from internal customers to end customers. Perhaps the greatest opportunity for change lies in the collaborative capabilities the Internet provides. The Internet supports the transition of transacting business through discrete, predictable, serial processes to a more cyclical, dynamic approach. The Internet provides a means to readily adapt technology that lets all parties work from the same system, using the same information, in a real-time environment (Miller, 2001).

The Internet also permits retailers to become more customers focused and responsive. External customers now have the power to determine when they shop, what they want to shop for, and how they want to receive the goods (by mail, by truck, or for pickup at the nearest store). At the same time, information directly collected about customers' buying habits assists retailers in tailoring product offerings and promotions to individuals.

Selling through websites is the fastest growing method of trading worldwide especially Business to business (B2B) trading where companies trade and exchange information using the World Wide Web and Business to consumer (B2C) trading where companies deal directly with customers through web pages, and ordering is carried out online.

There are many different types of products and services that are traded on line including books, CDs, cars, holidays, and insurance. In response to e-tailing and e-trading, most businesses have now set up their own websites (Miller, 2001).

E-business enables businesses to reach much wider audiences while cutting the costs of traditional
retailing methods. For example, an e-tailer does not have to spend so much on an expensive High Street presence. Although the outlay on developing a good website is substantial the potential benefits can be enormous. One group of businesses that have been particularly successful as a result of the development of the web is specialist suppliers of items such as paintings, photographs, confectionery, and other items. An individual working from home can now advertise and sell their produce worldwide.

The extraordinary growth in business to consumer (B2C) e-commerce and the high level of dotcom failures have attracted much media. However over 80% of e commerce revenues are generated within the business to business (B2B) sector. Furthermore e-commerce is transaction focused and is but one, albeit high profile, element of the e-business revolution - the use of electronic communication networks to integrate processes, transact (e-commerce) and collaborate in business markets. (Berranger, 2003)

Indeed, the Internet impacts all relationships. Easy access to timely, accurate, and targeted information by businesses and their suppliers, partners, and customers fosters relationships that are one to one rather than one too many. The personalization, communication, and functionality that are the outcome enhance and reinforce relationships in ways not possible in the past. Further implementation and extension of these principles will extend and enhance business relationships well into the future.

2.9. THE ROLE OF THE GOVERNMENT IN PROMOTING ICT

Governments world-wide have recognized the crucial role that ICTs can play in socio-economic development. In this respect, a number of countries in both the developing and developed world are designing economic policies that will accelerate the process of
transforming their economies into information and knowledge-based economies. There is no doubt that information and knowledge economy is generating opportunities across all sectors in a number of developed and developing countries. It is a new source for the creation of quality jobs, wealth generation, income redistribution and poverty alleviation, as well as for rapid economy development, prosperity and a source for facilitating global competitiveness. However if countries like Ghana are to move their industrially weak, subsistence agriculture based economy towards an information and knowledge economy they will need to develop and implement a comprehensive integrated ICT-led socio-economic development policies, strategies and plans (Dzidonu, 2002).

The challenge facing Africans in the digital world relates more to the formulation and implementation of appropriate ICT-led socio-economic development policies and plans that could aid the process of moving the economy and society to other side of the digital divide. The first Africa Development Forum organized by UNECA in 1999, five critically interrelated areas for strategic intervention by governments in developing countries. These include:

- **Infrastructure** – deploying a core ICT network infrastructure, achieving relative ubiquity of access, and investing in strategically focused capacity to support high development priorities.
- **Human Capacity** – building a critical mass of knowledge workers, increasing technical skills among users and strengthening local capabilities.
- **Policy** – supporting a transparent and inclusive policy process, promoting fair and open competition, and strengthening institutional capacity to implement and enforce policies.
• Enterprise – improving access to financial capital, facilitating access to global and local markets, enforcing appropriate tax and property rights regimes, enabling efficient business processes and stimulating domestic demands for ICT.

• Content and Applications – providing demand-driven information which is relevant to the needs and conditions experienced by local people (Dzidonu, 2002).

Ghana was amongst the first countries in Africa to achieve connection to the Internet. The rapid growth in this sector is set to continue in 2006. National and international public data services are provided by more than 20 companies and there are more than 50 VSAT networks operating in the country. Almost 100 new Internet Service providers (ISPs) were licensed in 2004 alone, bringing the total to more than 140. Broadband ADSL services were introduced in 2003. The government is committed to continuing the privatization of the national carrier, Ghana telecom, as well as the fibre network of Voltacom, the country’s electricity company. The full legalization of VoIP telephony and the implementation of Broadband over Power lines (BPL, PLC) are other key development expected (Miniwatts, 2009).
CHAPTER THREE

RESEARCH METHODOLOGY AND

PROFILE OF CASE STUDY ORGANIZATION

3.0. INTRODUCTION:

This chapter discusses the statistical survey method used in carrying out the study as well as the profiling of SMEs in the area of study. The chapter is thus divided into three (3) sections. The first section deals with specific statistical and general survey research methods employed in study particularly in the level of e-adoption among SMEs in Ghana. The second section deals with the operations research tools that were utilized for developing and adopting a practical model for e-business in Ghana. Particularly it gives the theoretical basis of e-business model and how it is used to develop and adopt e-business. The third section is concerned with the profiling of the area under study.

3.1. SURVEY METHODS

3.1.1. POPULATION
The target population for the study includes all SMEs in the Greater Accra Region of Ghana. These comprise a number of local, international and multinational organizations operating in Ghana. Apparently, no records exist that specifically details the number of SMEs, making the entire case forming the population unknown. Coupled with the problem of time and cost constraints in accessing data from centers, the researcher adopted a case study strategy, Accra Mall made up of local and international organizations as well as varying business activities such business services, wholesale and retail, financial institution, hotels and restaurants etc. was been adopted as a case study. The categories of persons from whom data was taken were mainly Entrepreneurs, CEO, Management and supporting staff.

3.1.2. SAMPLE AND SAMPLING TECHNIQUE

To better represent the view of the entire population, it is ideal for that data to be collected from all the cases in the population. This is easily achieved when it becomes possible to analyze data from every case in the entire population. However, certain constraints such as time may simply make it extremely difficult to access data from all these cases. A such, sampling techniques provide a range of methods that enable the researcher to reduce the amount of data to collect by considering only data from a subgroup rather than all possible cases. The sample, if well calculated could then be used as a generalization. In the case of this research however, the constraints as mentioned earlier made the researcher to adopt a case study strategy. Its limitation is that, the results cannot be effectively used to generalize events in the entire e-business adoption among SMEs in Ghana. It can however be very instrumental in decision making in e-business adoption among SMEs in Ghana.
Though the case study strategy was adopted, further sampling may be required since it is possible that some SMEs may be difficult to cover, given the constraints. For this research, a sampling size of one hundred and fifty (150) respondents comprising CEOs, Management and Supporting Staff would be required for the study. This comprise of local and international organizations in the Accra Shopping Mall irrespective of the kind of business embarked upon by the organization. The sampling technique also used was the purposive sampling of non randomized sampling technique. This enabled the researcher select respondents who would be able to provide the required needed information.

3.1.3. DATA COLLECTION

Primary data were collected and used for this study.

3.1.3.1. Primary Data collection

Primary data was obtained by using interviews and structured questionnaires. Data collected through these instruments focused on the level of e-business adoption, benefits and barriers to e-business adoption as well as the development of e-adoption model to help SMEs adopt modern business practices.
Interview

Interview response is one of the most important sources of case study information. The interview the researcher conducted was in two forms, Structured and unstructured. For the structured interview, the researcher employed it to elicit specific answers on the part of respondents particularly on the level of e-business adoption by the organization, their strengths and weaknesses. Structured interview was used because information obtained later can be compared and contrasted. For the unstructured, the researcher explored in depth a general area of the topic since it tends to resemble casual conversations pursuing the interest of both the researcher and the organization in turn. The interviews were carried out with different degree of openness. It also means that the interviews were carried out in an open-minded and conversational manner, where it was strongly recommended to make use of additional information provided by the respondent that goes beyond the questions. Through this, the interviews provided additional information of interest to the case. The interviews were used particularly when the respondents lack reading skills, and to probe deeper into a response given to a question. Though the response rate was high, it was time consuming and could not be used for the large number of respondents for the study.

Questionnaire

The researcher equally employed questionnaires to solicit primary data from respondents that include the Chief Executive Officers, Management and Supporting Staff. The questionnaire was divided mainly into four parts which sought to ask questions concerning the broad objectives of the
research. The first part deals with the background information of the respondents and that of the company or organization they work. This sought to identify the type of organization the human resources that the organization have that will help facilitate the modern trends of business. The data collected under this part includes Age, Educational background, Kind of business, number of employees and gender.

The second part of the questionnaire sought to find from respondents the level of E-business adoption they are operating currently using the stage or ladder model. The researcher however did not limit respondents to the provided answers but presented the questions in a flexible manner that enabled them to add other options to provided answers. Also respondents were also asked to rate the degree to which they perceive the levels in each stage of the model.

The third part sought to find out the benefits of E-business adoption by organizations. The questionnaire was strategically designed to make respondents rate their order of importance after identifying benefits of e-business to the degree to which they perceive to impact on the e-business adoption by the organization.

The final part of the questionnaire seeks to identify the barriers by rating the degree to which the respondents consider the barriers.
Most of the questionnaires administered by the researcher were done by hand and through e-mail. The questionnaires were administered and the completed questionnaires were received through the mails and personal collection. A reminder notice was sent to the respondents one week after the original contact so as to encourage participation. The researcher believes it increased the response rate. Unlike the interview method, the questionnaire method had no interviewer bias.

3.1.4. METHODS OF DATA ANALYSIS AND PRESENTATION OF RESULTS

Qualitative methods of data analysis helped the researcher in analyzing the field data collected to extract the relevant information. Additionally, the data gathered assisted in striking percentages by means of descriptive statistical analysis and presenting results in graphically in form of pie and bar charts. For this purpose the main software used include Microsoft Excel.

3.1.5. RESEARCH DESIGN

The research design was the general plan of how the researcher went about answering the research questions. The choice of research design depended on how the information should be gathered and
analyzed. It can be explained here as a choice between depths, width and time span of the research.

Besides, on the time horizon, the researcher employed a cross-sectional approach for the study where businesses within one environment formed the basis for the study. Although other business centres could have been added to the study area, the time constraints however limited this study to this area.

3.2. PROPOSED PRACTICAL FRAMEWORK FOR ADOPTION

Anukis (2009), provides six stages for his e-business model adoption whiles others provide five, four and the likes depending on the type of situation. For the purpose of this framework, three stages have been adopted and modified from Cooper and Burgess (2001) stage model.

The first stage in the model of e-business adoption involves SMEs gaining access to the Internet. With the influx of internet modems introduced by the various Telecommunication Networks in Ghana and the use of mobile phones as well as broadband connectivity, access to internet would be
easier though its cost and speed are questions to be answered later. Items that can be offered under stage one includes, sending and receiving e-mails, charting on social networks (twitter, facebook, Skype, etc), embarking on research and development using the internet, sending text messages, fax and telephony etc.

The second stage of the model is about creating a website of your own and updating with your information such as contacts, advertising of products, adding links, offering technical information about good and services, online enquiry, booking and reservations, answering customers questions and others.

The last stage takes a look at doing business on the Internet, Intranet or Extranet. Online ordering, payments, supply chain management and others can all be performed at this stage of the model.

This model does not have a lay down procedure to be followed. SMEs would be able to vary activities in each stage to be able to achieve desired results.
FIG 3.1 STAGE MODEL

STAGE 1
INTERNET ACCESS
- E-mails
- Text messages
- Fax
- Telephony

STAGE 2
WEBSITE
- Online inquiry
- Technical info.
- FAQs

STAGE 3
ONLINE BUSINESS
- Online payment
- Online ordering
- Links to warehouse
- Links to distributors
- Order status enquiry

Online Sales
3.3. PROFILE OF THE ORGANIZATION

In this subsection, the study presents the profile of Accra Mall, its vision and objectives and the types of businesses operated by SMEs of other companies.
3.3.1. HISTORY OF ACCRA MALL

The development of the Accra Mall and its current location was the product of some speculative conjecturing and educated guessing on the part of the initiating partner of the mall, Mr. Owusu-Akyaw. The 10 acre parcel of land which was initially planned for a hotel by the founder was turned into a mall on looking at the development trend of the city of Accra. The main vision was creating a community mall at the crossroad of Spintex Road and the Accra – Tema motorway to take advantage of the traffic at the location (Accramall, 2010).

The Accra Mall has been constructed to be self-sufficient and efficient in its operations: it boasts of its own waste water treatment facility as well as a self sufficient power generator. The Accra Mall, one of only two in West Africa and arguably the largest, provide urban Ghanaians with their first taste of local modern shopping experience. It has over 20,000 square meters let table spaces it has 65 outlets including 7 Restaurants, a 5 screen cinema and parking for over 1,000 cars.

The Accra Mall is been occupied by predominantly Small and Medium Enterprises (SMEs) both local and international organizations. In all about Seventy (70) tenants occupy the shops in the entire mall with about 5000 employees. About 70% of the businesses are local whilst 30% are multinational and international organizations. The types of business the occupants are into include Banking, Telecommunication, Retail Supermarkets, Consultants, Show rooms, Recreational, and other Services.
According to the management of the mall, the A-grade Accra mall has raised living standards by providing food and products as well as leisure facilities in a safe and congenial shopping environment. It has enabled Ghanaians enjoy the goods and services widely available elsewhere in the world. In effect about 18,000 people enter the mall daily. (Accramall, 2010).

In many African countries, open-air markets with stalls and shops have always been the norm in providing goods for shoppers. However, with rising consumer expectations and high growth in the retail sector, the time has come where the shopping mall concept should be entrenched. Increasing consumer demand is creating a trend toward formalized shopping centres with anchor tenants and many national retailers (Accramall, 2010).

As the middle-class grows, individuals want to shop in a better atmosphere where they enjoy the variety and choice that a large shopping centre can provide. The Accra Mall provides urban Ghanaians with their first local modern shopping experience.

A growth in the retail industry has been a catalyst for job creation, the reduction of protectionism, infrastructural improvements, improved standards of living, competitive advantages and general economic growth.

As the country forges its way towards becoming a middle-income country, the Accra Mall is a palpable symbol of the need to meet the increasingly sophisticated consumer needs of a modernized economy. The mall provides a totally new lifestyle of a one-stop shopping complex as seen in the United States, Europe and other parts of the world.
Experts believe that, as a pioneering development, the mall act as a major tourist destination and help boost investment in Ghana. It will stimulate the local property market, attract investors and create a modern business environment. Also, it will spur growth in the retail industry by helping to develop new business skills, make the business more professional and make managers more aware of new trends in the industry.

THE ACCRA MALL

The 20,000 m2 multi-purpose mall was being constructed at the crossroads of the Tetteh Quarshie Circle and Spintex road providing access from the Airport and surrounding residential and commercial areas. It is the largest real estate project currently in Ghana and offers an integrated retail experience with a full range of services all within a modern-state-of-the-art-infrastructure. This modern retail and commercial mall is anchored by Africa’s premier retailers Shoprite and Game. It is also balanced with other quality national retailers such as Mr. Price, Truworths and Identity as well as Puma. T M Lewin, Nike, Woodin, and Legacy gift, Sony Centre, MTN, and Starlite.

The upper level of the mall houses a cinema complex with five movie theatres and a restaurant with overlooks the food court, situated centrally in the mall. Restaurants such as Rhapsody’s Ocean Sting, Barcellos, Frankies, Tante Marie and Enda Café promise to introduce a standard of quality rarely seen in the Ghanaian hospitality industry. The centre has a lower level banking area facing spintex road accommodating Stanbic Bank, Ecobank, Barclays Bank, Unibank and the State Insurance Company Limited (SIC). It was designed by Johannesburg based Bentel and Associates International (BAI) in association with Multicad (a Ghanaian based architectural firm) and
constructed by Be Simone. The Accra Mall is under the management of Broll Ghana Limited, a member of the Broll Property Group. Actis is the majority shareholder in the Accra Mall and has a good track record in Africa, having supported similar projects in the past such as the US$50 million palms shopping centre in Lagos Nigeria, and the 16,000 m2 Junction shopping centre Nairobi, Kenya (Accra Mall, 2010).

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.0. INTRODUCTION

In this chapter, the researcher intended analyzing and interpreting the findings from the data collected from the survey. The analysis was grouped into four main headings. The first is composed of the E-adoption ladder or stage model which sought to find out the level of e-business adoption the SMEs in the Mall are currently operating. The second section considers identifying the benefits
of e-business adoption among SMEs in Ghana. The next stage takes a look at the barriers affecting e-business adoption and the last stage looks at the role of the Government towards e-business adoption and a practical framework for the adoption.

4.1. E-ADOPTION STAGE/LADDER MODEL LEVEL

Anukis (2009), suggests that the only way that businesses could spread costs and risk of ICT investment and enables them to achieve maximum return on investment (ROI) is through the e-adoption ladder model. According to Vinsign (2005), all countries in the world think highly of e-business and make it as impetus to the development of their economy. It is getting more and more attention from entrepreneur and consumers globally. One of the main reasons is due to the highly successful operations of some well known names on the Internet such as yahoo, dell, amazon, etc. (Vinsign, 2005).

E-adoption stage model allows you to ensure today’s foundation to support tomorrow’s improvement. It is in this light that the researcher intended to identify the level of e-business adoption by SMEs operating in the Accra Mall of Ghana using the E-adoption ladder model developed by Anukis.

4.1.1. Internal communication.

This seeks to find out how businesses communicate in terms of telephone, email, instant messaging, text messaging and faxing. It also means communicating with outlying or remote offices.
The table below shows how internal communications are effected among SMEs by rating from highly important to not applicable.

**TABLE 4.1 SUMMARIES OF INTERNAL COMMUNICATION IN THEIR BUSINESS TRANSACTION**

<table>
<thead>
<tr>
<th>Transaction</th>
<th>Perceived importance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Highly Important</td>
</tr>
<tr>
<td>Instant messaging</td>
<td>-</td>
</tr>
<tr>
<td>E-mail</td>
<td>22.7</td>
</tr>
<tr>
<td>Text messaging</td>
<td>9.1</td>
</tr>
<tr>
<td>Fax</td>
<td>16.7</td>
</tr>
<tr>
<td>Telephone</td>
<td>26.7</td>
</tr>
<tr>
<td>VOIP</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Field Survey (2011)

**Instant Message**

Table 4.1, indicates responses from respondents on how you communicate with your partners/customers in business, under the first level of the E-adoption Model which is the internal communication.
Out of the 150 respondents, 14% indicated high, 16.7% indicated fairly high, 32% selected low and 37.3% indicated not applicable. This is evident that most of the respondents did not know what instant messaging was about. This is because of the small size of workers mostly found in businesses owned by SMEs. According to Wikipedia (2012), instant messaging is a set of communication technologies used for text-based communication between two or more participants over the internet or other types of networks. Those who admitted using instant messages said they do not use it often for business but for their personal chart with friends and relations. Examples of instant messages are Yahoo messengers, Facebook, Twitter etc.
The use of the e-mail was common to all the respondents from the client indicated about it indicated that over 91% of the respondents indicated their use of e-mail was fairly high to highly important.

**Figure 4.2: Bar Chart showing responses of percentages on e-mails**

![Bar Chart](chart.png)

This confirms Layne, (2001) that communicating by e-mails is almost instantaneous, which can enhance communications by allowing for quick dissemination of information and fast response to customer inquiries. It was evident that E-mail usage was very fundamental to E-business adoption and that there was an indication that all the businesses at the mall in one way or the other had access to Internet. A question was asked to find out the infrastructural requirement for the e-business adoption by the respondents. It was indicated that about 90% of responses were that they
had broadband internet connection or a modem. Again the results indicated that they had personal computers and laptops to connect their internet modem or broadband.

**Text Messages**

On text messages, 53.3% of the respondents indicated low use in their business activities, 13.3% said it was fairly high, 24.3% said high and 9.1% indicated highly important in their usage. Though this indicates a low patronage, the percentage rate of usage is encouraging at this level. Currently most organizations have started using text messages to extend occasional greetings to their prospective customers. Banks and Insurance companies have also started using SMS to reach their clients.

**Fax**

The use of Fax is one of the oldest forms of communication. Though expensive as compared with text messages and e-mails yet respondents indicated they acknowledge its usage and they see it as an authentic means of transacting business between organizations. According to their responses 16.7% considers the use of fax as highly important, 32% as high, 37.3% indicates fairly high, and 14% low. This is an indication that it is an effective and efficient way of sending reliable information among businesses.
Telephone

Another old communication device is the telephone. According to the responses 93.3% of the respondents considered the telephone as highly important communication tool for business organizations both locally and internationally. Only 6.7% saw it as a Low form of communication.

According to Graham (2012), telephone usage will be reduced to 5% of all business communications by 2015. Businesses have other options, such as digital communication through e-mail, texting and social media. Telephone communication may be slower than its new media counterparts, but it still has benefits in an increasingly impersonal world.

VOIP

Voice Over Internet Protocol (VOIP) was considered very important by some businesses such as the banks and travel and tour companies, 22.5% of the respondents indicated that they were very economical but limited to the company only. 87.5% of the respondents said the use of VOIP was not applicable due to the nature of their business. They do not use on-line transactions very often; others indicated they do not even know how it is being used.

In summary, it was observed that the use of a particular communication tool depended on the type of business and the type of clients one deals with. Almost one or two of the communication tools were being used effectively to gain competitive advantage over the other.
4.1.3. INTERNAL COLLABORATION

Under this adoption ladder, the researcher intended finding out how respondents share documents such as invoices, order inventory, procurements and other information across departmental / geographical boundaries.

Courier

On courier services such as EMS, DHL and Postal services, 93.3% said they hardly share documents through courier, 6.7% considered courier as highly important. Organizations that considered it very important were the financial services and Business services. They explained that items that cannot be sent electronically are posted.

Courier services is gradually becoming unattractive with the advents of technology, people prefer exchanging documents such as invoices, order inventory and the rest through the internet which is perceived to be fast and easy to use.

Self Delivery

Out of the 150 respondents, 10% said they prefer sharing documents through self delivery whilst 38.7% said low and 51.3% indicated not applicable. The shows that most businesses do not want to
travel long distances because of the poor nature of our roads and its adverse effects. Though they are interested in transacting business, they do not want to risk their life at the expense of their business.

E-Mail

On e-mail, according to internal collaboration, 29.3% said it was highly important, 33.3% believed it was high, 24% see it as fairly high and 13.3% said it was low. This indicated that most of the respondents prefer sharing documents such as invoice, order, inventory, procurements and share information across departmental or geographical boundaries, because of it efficiency, affordability and time saving. A further interview with some of the wholesale and retail businesses indicated that, now they order goods through e-mail from abroad without necessary travelling to Dubai or China to transact with suppliers. This goes to explain that SMEs are gradually and unconsciously adopting electronic business.

Transport

With transport, 96.3% of the respondents said it was not applicable sending or receiving documents from one department to the other. 3.7% said they share documents through organized transport organization such as STC Intercity Company, VIP buses and others from one region or city to the other.
4.1.4. PLACE IN THE WORLDWIDE MARKET

Print media:

The researcher intended finding out how customers know they exist and can easily locate them.

Figure 4.3: Pie Chart showing responses of percentages on print media

Out of the 150 responses, 62.6% indicated high, 24.0% said fairly high, and 13.3% said low. This indicated that more organizations use the print media to advertise their existence. The print media spread over the length and breadth of the country and so they believe they could reach out to wider people locally.

Source: Researcher’s construct (2011)
According to the respondents, 26.4% indicated not applicable, 36% indicated Low. 4.8% said fairly high and 38.8% indicated high. Though the percentage of respondents advertising on the internet was not high, it was good for a developing country like Ghana. Most of the respondents indicated that they had website but find it difficult updating their website. This was found to be a barrier to e-business adoption which would be consider later. Anukis (2009), iterated that advertising on the internet is almost a necessity for modern businesses especially those that do business outside for their local community. Consumers use the internet for more than simple entertainment or information as they do with radio, television, magazines and newspapers. The internet’s vast reach can allow advertisers to reach significantly more traditional advertising media at a fraction of the cost. Internet advertising is ideal for businesses with a national or international target market and a
large-scale distribution capabilities. As a rule, the more people your business services, the most cost-efficient internet advertising can be (Anukis, 2009).

Friends

Out of the 150 respondents, 62.7% said high and 37.3% indicated low. This indicated that most of the organizations or businesses are known through friends.

Television Advertisement

With television advertisement, 40% of the respondents indicated highly important, 35% high, and 25% fairly high. This indicated that television advertisement was mostly used for creating awareness and this was as a result of the illiteracy rate among the populace. Most businesses deal with the local market and that they prefer using the local media to advertise their organizations.

4.1.4. INTEGRATED SUPPLY CHAIN MANAGEMENT

This level of the E-Adoption ladder sought to find out how the organizations integrate supply chain management to their day to day activities, i.e., how they liaise and collaborate with their supplies electronically. Out of 150 respondents, 89.7% indicated not applicable meaning they do not integrate supply chain management in their system, 19.3% indicated they have a system of that nature. They were predominantly travel and tour agencies which deal with ticketing and
reservations. It was explained that it helps them track ticket reservations and available tickets for travelers.

According to Anukis (2009), companies that are able to integrate supply chain managements electronically are those that have adopted e-business and know the benefits of on-line transactions.

4.1.5. OPEN SYSTEM INTEGRATION:

The researcher intended finding out whether organizations integrate external systems electronically, make and receive payments electronically. Out of 150 respondents, 76.8% said No and 24.2% said yes. A further probe was done to find out why they were not accepting electronic payments. It was realized that they do not have the system in place to enables them receive and make payments electronically. The few organizations who receive payments transact locally with Ezwich, ATM cards and Visa cards locally.

In considering the level of e-business adoption among SMEs in Ghana using the Stage / ladder Model of Anukis, it was observed that open system Integration and Integrated supply chain management were not being practice effectively and efficiently among the local SMEs but with some foreign organizations with branches in Ghana. The third level, using the internet to find place in the Market place was being practiced as a result of website creation but had the challenge of updating it hence the inability to properly advertise on the internet. Lastly SMEs have been found to be doing business electronically either consciously or unconsciously using the first two stage models of the eadoption ladder. Almost all the respondents had access to the internet at the office or home.
but did not consider as being there for online transaction. Most believe the internet was there for entertainment rather than business.

4.2. BENEFITS OF E-BUSINESS ADOPTION.

The second objective was to identify the benefits of adopting e-business among SMEs in Ghana. In view of this, the researcher intended finding the perception of respondents on the benefits to the adoption of E-business by SMEs by rating whether they strongly Agree, Agree, Neutral, Disagree and strongly Disagree. The table below shows the frequency distribution for rating the benefits of e-business adoption.

**TABLE 4.2. SUMMARIES OF E-BUSINESS ADOPTION BENEFITS**

<table>
<thead>
<tr>
<th>Perceived Benefits</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced cost of business operations</td>
<td>-</td>
<td>13.3</td>
<td>6.7</td>
<td>80</td>
<td>-</td>
</tr>
<tr>
<td>Easy and fast exchange of documents and information</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>Improve customer service</td>
<td>-</td>
<td>25</td>
<td>15</td>
<td>55</td>
<td>-</td>
</tr>
<tr>
<td>Providing customer more satisfying business experience</td>
<td>-</td>
<td>40</td>
<td>10</td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td>Increase the availability</td>
<td>-</td>
<td>15</td>
<td>5</td>
<td>70</td>
<td>10</td>
</tr>
<tr>
<td>of products/services to customers</td>
<td>-</td>
<td>-</td>
<td>8.8</td>
<td>91.2</td>
<td>-</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----</td>
<td>----</td>
<td>-----</td>
<td>------</td>
<td>---</td>
</tr>
<tr>
<td>Improve accessibility to more customers</td>
<td>-</td>
<td>30</td>
<td>40</td>
<td>30</td>
<td>-</td>
</tr>
<tr>
<td>Support linkage with suppliers</td>
<td>-</td>
<td>11</td>
<td>28.2</td>
<td>60.8</td>
<td>-</td>
</tr>
<tr>
<td>Increase ability to compete</td>
<td>-</td>
<td>20</td>
<td>9.6</td>
<td>51.3</td>
<td>7.7</td>
</tr>
<tr>
<td>Providing managers better access to information</td>
<td>11.4</td>
<td>10</td>
<td>30</td>
<td>52</td>
<td>10</td>
</tr>
<tr>
<td>Support strategic decision of managers</td>
<td>-</td>
<td>28.4</td>
<td>6.5</td>
<td>65.1</td>
<td>-</td>
</tr>
<tr>
<td>Support co-operative partnership in the industry</td>
<td>-</td>
<td>-</td>
<td>18.7</td>
<td>81.3</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Field Survey (2011)

**Reduced Cost of Business Operations:**

The researcher intended finding out whether they agree or disagree on the benefit of reduced cost of business operations, out of 150 respondents, 13.3% said they disagree, 6.7% remained neutral and 80% agreed to the assertion that e-business reduce the cost of business operation. Below a pie chart depicting the results
According to Anukis (2009), the perceived benefit helps in reducing overhead cost, reduction in employees' recruitment and reduction in space for clients and customers. Bynoe (2002), indicated that at outer firm level, the internet and e-business have great potential for reducing transactions cost and increasing the speed and reliability of transactions. They can also reduce inefficiencies resulting between buyers and suppliers and build closer relationships among trading partners.

In fact, adopters of e-business tend to reduce transaction costs, increase transaction speed and reliability, and extract maximum value from transactions in their value chains (OECD, 2002)

**Easy and fast exchange of documents and information:**
All the respondents interviewed agreed that E-business adoption facilitates easy and fast exchange of documents and information such as invoices, order and other vital documents.

**Improve Customer Service:**

55% of the respondents agreed to the benefit, 15% remained neutral, 25% disagree with improve customer services as a benefit of e-business. E-banking for instance, have reduced the long time customers spend at the bank, ADB adopted e-business in 1999 to respond to the changing marketing trends in the Ghana banking industry. Their e-business products include, internet banking, SMS Banking, E-statement, E-Alerts, ATM and on-line fee paying system. According to her the introduction of e-business by the bank increases their turnover to about GH1,200,000 (Anukis, 2009).

**Increase the availability of products/services to Customers:**

The researcher intended finding out the rate at which the availability of products / services to customers was a benefit of e-business adoption, out of the respondents, 15% disagreed to the statement, 5% remained neutral and 80% strongly agreed to the statement. They agreed that E-business facilitates work and make it easier. In view of that, new products can easily be added hence increased market share and profit maximization.

**Support linkage with suppliers:**

30% of the respondents disagreed with this statement, 40% remained neutral and 30% agreed. This indicated that because most of the SMEs were not fully engage in E-business they do not have support linkages with suppliers share. They could easily check inventory and advice on an order.
Increase ability to compete:

60.8% of the respondents agreed with the ability to compete as a benefit to e-business, 28.2% remained neutral and 11.0% disagreed with the statement. This indicated that because there was a wider market on the internet, it increased the ability of businesses to compete with others both locally and internationally.

Providing managers better access to information:

According to the responses, 11.4% strongly disagreed, 20% disagreed, 9.6% neutral, 51.3% agreed and 7.7% strongly agreed. This indicated that owners of SMEs were able to take strategic decisions from information gathered on the internet. They have a wide range of information to enable them take decisions.

Support strategic decision of Manager

With the benefit of supporting strategic decision of managers, 68.1% of respondents agreed to the benefit, 6.5% remained neutral and 28.4% disagreed with the benefit. This was an indication that the economic trend in relation to business is fast growing and that organizations and SMEs needs to strategies to be able to compete favourably in the competitive market.

Support co-operative partnership in the industry:

Out of the 150 respondents, 65.1% said they agreed, 6.5% remained neutral and 28.4% said they disagreed with the statement. This indicated the e-business support co-operative partnership in the industry. As the world is moving online, SMEs in emerging markets are gaining greater bargaining power in the global economy despite their limited capital and mobility. Links are being established among businesses to expand their industry hence competitive advantage in the global business.
Saves time:

81.3% said they agreed and 18.7% remained neutral. This indicated that e-business adoption enables both the company and its customers save time in almost all transactions.

4.3. BARRIERS TO E-BUSINESS ADOPTION

E-business adoption in Africa is gradually growing but the rate of growth is being challenge by a number of barriers. It is in the light of this that the researcher intended identifying some of the barriers affecting the growth of e-business in Ghana. The respondents perception was to either strongly agree, agree, neutral, disagree or strongly disagree with barriers perceived to be hindrance to the growth of e-business adoption.

The table below indicates summaries of barriers to e-business adoption

<table>
<thead>
<tr>
<th>Perceived Barriers</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low level of technology usage within the organization</td>
<td>-</td>
<td>21</td>
<td>10.5</td>
<td>68.5</td>
<td>-</td>
</tr>
<tr>
<td>Low level of literacy among SME owners</td>
<td>-</td>
<td>19.7</td>
<td>-</td>
<td>80.3</td>
<td>-</td>
</tr>
<tr>
<td>Unconvincing benefits to the organization</td>
<td>-</td>
<td>42.1</td>
<td>15</td>
<td>43.9</td>
<td>-</td>
</tr>
<tr>
<td>Issue</td>
<td>Agree (%)</td>
<td>Neutral (%)</td>
<td>Disagree (%)</td>
<td>Total (%)</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>--------------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>Lack of qualified staff to develop, implement and support web sites</td>
<td>-</td>
<td>18.3</td>
<td>-</td>
<td>31.2</td>
<td>50.5</td>
</tr>
<tr>
<td>Limited resources in terms of finance, computers, software and hardware</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>High cost of Internet Connectivity and website</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30</td>
<td>70</td>
</tr>
<tr>
<td>Inadequate transport and delivery network</td>
<td>-</td>
<td>-</td>
<td>20</td>
<td>80</td>
<td>-</td>
</tr>
<tr>
<td>Inadequate telecommunication infrastructure such as poor internet connectivity</td>
<td>14.4</td>
<td>28.7</td>
<td>-</td>
<td>56.9</td>
<td>-</td>
</tr>
<tr>
<td>Lack of online payment process.</td>
<td>-</td>
<td>13.1</td>
<td>-</td>
<td>56.9</td>
<td>-</td>
</tr>
<tr>
<td>Limited availability of Online banking Services</td>
<td>-</td>
<td>29.6</td>
<td>15</td>
<td>55.4</td>
<td>-</td>
</tr>
<tr>
<td>Lack of developed legal and regulatory systems</td>
<td>-</td>
<td>-</td>
<td>3.5</td>
<td>96.5</td>
<td>-</td>
</tr>
<tr>
<td>Lack of government support</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>Lack of popularity for online business transactions</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>92</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Field Survey (2011)

Low level of technology usage within the organization:

The researcher intended finding out whether there was low level of technology usage within their organizations. 68.5% of the respondents agreed, 10.5% remained neutral and 21% said they disagreed to the barrier. From the responses, it was deduced that most SMEs use the traditional
system and because they lack the technical knowhow, they find it difficult adopting such a system. Their major problem was how to monitor their work when they introduce technology into their environment of work.

**Low level of literacy among SME owners:**

With the statement of literacy 80.3% of the respondents agreed to the statement whiles 19.7% disagreed with the notion. A further clarification was that they were not illiterate as in reading and writing or academics but their illiteracy was in connection with Technology. They were not knowledgeable in the use of ICT and most of the felt though they had the fundamentals yet would not be able to support business transactions.

**Unconvincing benefit to the organization:**

Out of the 150 responses, 42.1% disagreed that the benefit of e-business was unconvincing. 15% remained neutral and 43.9% agreed that truly there were no unconvincing benefit since business was good and the growth rate was encouraging to the SME owners. They believed business was good and growth was encouraging and so there was no strategy that could strategically change the way business was being done.

**Lack of qualified staff to develop, implement and support website:**
It was realized from the responses that 50.5% strongly agreed to the statement, 31.2% agreed and 18.3% disagreed to the barrier. This responses reinforce the statement made by Kapurubandare (2006), that lack of knowledge on how to use the technology and perceived benefit is a major factor that owners lack to take up to e-business. More so, the low computer literacy is another contributing factor for not adopting e-business.

**Limited resources in terms of finance, computers, software and hardware:**

According to Cavaye et. al. (1999), most SMEs are concerned about return on investments and for that matter reluctant making substantial investments particularly when short term returns are not guaranteed. Under this barrier all the respondents agreed to the fact that business owners were not willing to spend on ICT when its impact on the business was not deeply felt.

**High cost of internet connectivity:**

70% of the respondents not only agreed but strongly agreed to the high cost of internet connectivity. 30% also agreed to the same issue. Most of the respondents interviewed at the Mall had access to broadband connectivity in their offices but their monthly subscription for internet in addition to their phone bills made it outrageous for their activities. Others also attributed to the fact that even if the cost was high and the connectivity was fast, they would prefer. But rampant break in connectivity was a hindrance to e-business. Many others attested to the fact that internet connectivity in Ghana was very slow.
Lack of online payment system:

Out of the 150 respondents, 87.9% agreed to the lack of online payment system whilst 13.1% disagreed to the statement. This was an indication that though some forms of online payment have been introduced, its security and applicability cannot be guaranteed. According to OECD (2004), uncertainty of payment methods, legal framework and intellectual property and challenges in areas of management skills, technology capabilities, productivity and competitiveness hinders the smooth operation of online payment system.

Limited availability of online banking services:

45.5% of the respondents agreed with the limited availability of online banking services, 20% remained neutral and 29.6% said they disagree with limited availability of online banking services. The reason was being that most banks were afraid of fraud, hacking, and encryption. It is believed that with the advent of time, problems of this nature would pave way for better online banking services.

Lack of developed legal and regulatory systems:

Out of the 150 respondents, 96.5% agreed that there was lack of developed legal and regulatory system as well as government support. 3.5% remained neutral to the statement. A further investigation was to find out whether respondents were familiar with the integrated ICT-led Socio-economic development policy and plan development for Ghana. Out of the 96 respondents interviewed, 78 said they have no idea if the government had such plans. The others said they have heard of it but have not read the detailed report. This further explains that though Ghana has such a
Policy in place little efforts have been done to implement the various phases of the ICT4AD which is the term popularly used.

**Lack of popularity for online business transactions:**

Almost all the respondents were of the opinion that it was not popular. 92% of the respondents agreed with the statement whilst 8% remained neutral. This was an indication that stakeholders have to encourage many businesses adopt e-business. Currently a handful of businesses in Ghana have adopted e-business but their level of adoption compared to the E-adoption ladder model does not make it popular.

### 4.4. PRACTICAL FRAMEWORK ON ADOPTION

The researcher wanted to find out the perception of respondents how they would want to get started the implementation of e-business strategy in their organization.

From the table above, the e-business adoption framework with the least frequency starts the order to the highest frequency.
### TABLE 4.4. PRACTICAL FRAMEWORK FOR ADOPTION

<table>
<thead>
<tr>
<th>Practical framework</th>
<th>Frequency</th>
<th>Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buy and sell online</td>
<td>855</td>
<td>8&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Make and receive payment online</td>
<td>1259</td>
<td>10&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Emails to communicate with customers and partners</td>
<td>642</td>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Interact on social network (youtube, facebook, twitter, skype)</td>
<td>750</td>
<td>5&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Get a computer</td>
<td>161</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
</tr>
<tr>
<td>Get an internet modem /broadband</td>
<td>526</td>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
</tr>
<tr>
<td>Create a website</td>
<td>821</td>
<td>6&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Advertise products and services online</td>
<td>826</td>
<td>7&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Integrate supply chain management in your system</td>
<td>946</td>
<td>9&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Fundamental ICT training</td>
<td>284</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

*Source: Field survey (2011)*
From the diagram above, it was evident that organizations which intended adopting e-business would want to get a computer first. The acquisition of computers would help workers have a firsthand ICT training on the computers. Using e-mails, social network, and internet access forms the first stage of the e-adoption ladder model from Anukis, (2009). They form the 3rd, 4th and 5th order in practical framework above.

The 6th and 7th order forms the second stage of the e-adoption model. This indicated that when the organization is able to utilize the first stage effectively, there would be enough motivation to create a website and advertise products and services online. Integrated supply chain management, buying and selling online as well as make and receive payment online forms the 8th, 9th and 10th positions in the order of merit. Anukis (2009), indicated that e-adoption ladder has the integrated supply
chain as the 5th position. This indicates that it is the highest order on the ladder which is adopted by advance and developed countries which have adequate infrastructure and security.

4.6. DISCUSSION OF RESULTS

The researcher under this section sought to discuss the results of the data analyzed in the under listed findings.

- It was observed that the use of a particular communication tool depended on the type of businesses and the type of clients one deals with. Two or more of the communication tools reviewed were being used efficiently and effectively to gain competitive advantage over the other.

- The levels of E-business adoption among most SMEs using the Anukis Model were within the first three levels of the Stage model. There were other SMEs who were adopting the fourth, fifth and sixth stages though not simultaneous but flexibly switched to suit their business objective or strategies.

- Some SMEs adopted e-business unconsciously in their transactions. The results indicated that Order enquiry, invoicing and exchange of documents were being practiced by most of the SMEs. Most of them indicated that they order on-line and their bill of lading for the shipment and other documents sent to them via e-mail.

- The results also revealed that most SME owners were unwilling to invest huge sums of money into website design and updating as well as E-business software. The cost of creating and maintaining website was very high to most SMEs.
• Again it was indicated that most of the customers were illiterate in ICT and that they felt patronage would not be high when e-business was to be adopted.

• The results also show that the problem of on-line payment system and the influx of internet fraud served as a hindrance to the adoption.

• Finally, it was indicated that the government was not supporting and promoting ICT for accelerated growth thought the country has an ICT policy for development.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0. INTRODUCTION

This chapter constitutes a brief summary on the content of this project and outlines conclusion derived from the analysis and also informed recommendations based on the analysis of the data the areas of level of eadoption model, benefits and barriers of adopting the e-business among SMEs in Ghana.
5.1. SUMMARY

The adoption of e-business in Ghana by SMEs and other organizations is worth considering looking at the trend of doing business in recent times. The study specifically attempted to find the level of e-business adoption among SMEs using the E-adoption stage model. This was to identify the stage SMEs in Ghana are currently operating and the way forward; to identify the benefits of the e-business adoption by SMEs; identify the barriers affecting e-business adoption; considers the role the government is playing to promote e-business in Ghana; adopt a practical framework for e-business adoption by SMEs; generate suggestions for stakeholders for strategic decisions.

A case study strategy was used and the instrument used in collecting data for the study involved questionnaires and interview. Questionnaires were administered to selected members and the interview was employed to collect data from some respondents who could not have time to read and those who wanted clarifications on technical terms used. Data were collected mainly awareness, level of e-business adoption, benefits of e-business adoption, barriers affecting e-business adoption and a practical framework for eadoption. Summary of findings:

- Perceived understanding of e-business by SMEs was encouraging since most the respondents had an idea of the concept.
- The model adopted enabled respondents identify the level of e-business adoption operating.
- E-business was unconsciously adopted by most SMEs.
- The survey identified perceived major benefits enhancing the adoption of the concept by SMEs
- The survey also identified perceived barriers hindering smooth operations.
A modified practical framework as a guide for strategic decisions on e-business adoption.

5.2. CONCLUSION

The stage model provides guidance and logical process for implementing ICT solution into business. Unlike other stage models, this model does not have to be strictly followed, depending on the prevailing circumstance, e-adoption stage model can incorporate dynamisms to enable it address recurring criticisms of the adoption ladder. From the first stage which is efficient internal and external communication to the sixth stage which is open systems integration, one can flexibly interchange the levels to meet the strategic objective of their organization. In view of this, most of the respondents were able to identify their level of e-business adoption and were poised to improve upon it.

It was obvious from the study that the benefits of e-business were well known to SMEs and represent a formidable force to the growth of e-business. The general recognition of the positive impact of e-business on: reduction of cost of doing business, improved productivity and customer service, expansion of geographical reach appear very attractive to SMEs. In view of the enumerated benefits, responding SMEs have come to accept e-business as a novelty that has a very great potential of improving their services though this study did not involve interviewing customers, it became obvious that if well adopted would produce positive changes in customers’ and staff attitude as well as maximizing profit. Finally, respondents considered the benefits as an emerging revolution in modern business transactions.

From the study, prominent perceived barriers to the adoption of e-business by respondents were their preference for established business models and cost factors. However, the SMEs are still
conservative and would always prefer established models where alternative exists. In a country where most hardware, software and qualified personnel are still imported to implement and support ICT solutions such as e-business, the cost are mostly high. Often the setup and recurring cost of maintaining these systems are prohibitive. SMEs that are able to train and build competencies in their own staff have lower cost of adopting e-business than importing expertise.

Even though, the government is supporting the growth in the private sector in general and SMEs in particular, the support in promoting e-business is not encouraging. In fact, Ghana had made an attempt in formulating ICT4AD which provides certain regulations and laws concerning internet and e-business, much education has not been given to citizenry. Most SMEs have keen interest adopting e-business but they fear that they may be deceived through internet fraud, hacking and encryption among others.

However, there is an increasing growth of online business in the private sector indicating a promising future for online business in Ghana.

5.3. RECOMMENDATIONS

In view of the eadoption model being dynamic, it is recommended that SMEs strategize on their strengths which indicate what they have to enable them get enrolled. For the purpose of the Accra Mall, broadband internet connective is available in every office for connectivity and where there are no broadband, the modem could equally be used for the internet. The social networks such as facebook, twitter, yahoo messenger, YouTube and the like could be used as a starter in exchanging information and advertising platform for customers.
SMEs should consider their weakness before choosing e-adoption stage. Most SMEs would not want to invest huge sums of money into an ICT solution and would have to consider other opportunities to the eadoption. It is also recommended that SMEs should always try to avoid threat.

Future research studies should be done on the following:

- There is the need for a study involving a larger sample size drawn from a broader spectrum of firms to see if the findings reported in this study hold in other cases.
- Research consideration would be a comparative study of the determinants of e-business adoption among the types of SMEs.
- Investigate the role of government in promoting e-business in Ghana?
- Investigate how internet can be used effectively and efficiently to open new distribution and retailing channels in foreign markets?
- What are the trends and prospects for e-business in the urban and rural areas in Ghana?
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UNIDO (1999) SMEs in Africa Survive against all odds


QUESTIONNAIRE

Background Information

1. Position/Role of Interviewee in the organization: .................................................................

2. Age:  
   tick as appropriate
   25 or less ■ 35 ■ 45 (■ 55 ■ 65 above ■)

3. Gender: Male ■ female ■

4. Educational level: Diploma and below ■ Bachelor’s Degree ■ Master’s Degree ■
   PHD and above ■

5. No. of years in the organization: 5 or less ■ 6 ■ 11 ■ 16 ■ 21 ■ above ■

Company

6. Which kind of business are you operating?
   Business Services ■ manufacturing ■ Wholesale and Retail ■ Financial Services Construction ■
   Hotels and restaurants ■
   others specify..............................

7. How many employees are in your organization?
   Below 9 (Micro) ■ 9 (Small) ■ 50-99 (Medium) ■ 250+ above (Large) ■

8. Which of the following category does your organization belong??
   a) Local
   b) International
   c) Multinational
   d) Other(s) specify..........................................................
AWARENESS/ E- READINESS

9. Please rate the extent to which the following best explain your understanding about E-business.

Scale 5- highly important, 4- high, 3 -fairly high, 2-low, 1- Not applicable

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buying and selling of goods on the internet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising on the Internet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online business transactions with partners, suppliers and clients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating a website</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others Specify</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. Indicate  Yes/No if your organization has the following infrastructures which are the basic requirements for ebusiness adoption.

<table>
<thead>
<tr>
<th>INFRASTRUCTURE</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Networked computers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Website</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broadband connection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet connection</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
E-ADOPTION STAGE/LADDER MODEL LEVEL

Level 1: Internal communication

11. Please rate the following on how you communicate with your partners/customers in business.
    Scale 5- highly important, 4- high, 3 -fairly high, 2-low, 1- Not applicable.

<table>
<thead>
<tr>
<th>Method</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instant messaging</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-mail</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Text message</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fax</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Telephone</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VoIP</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Others please specify: .................................................................

12. How effective are your communication as indicated in question 11.
   a. Affordable
   b. Prompt response
   c. Reliable
   d. Easy to use

Level 2: Internal collaboration
13. Rate the following to the extent on how you share documents such as Invoices, Order, Inventory, Procurements and other information across departmental/ geographical boundaries?
Scale 5- highly important, 4- high, 3 -fairly high, 2-low, 1- Not applicable.

<table>
<thead>
<tr>
<th>Method</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courier (eg.EMS, DHL)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self delivery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-mail</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Others please specify:........................................................................................................

14. How efficient is your internal collaboration method across boundaries? ..................................  

Level 3: Place in the worldwide market

15. How do you ensure that your customers know you exist and that they can find you easily?
Rate the following according to the above question in the scale of 5- highly important, 4-high, 3-fairly high, 2-low, 1- Not applicable.
Level 4: Integrated supply Chain Management

16. How do you liaise and collaborate with your suppliers electronically? Rate the following according to the above question in the scale of 5- highly important, 4- high, 3 -fairly high, 2- low, 1- Not applicable

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through the print media</td>
<td></td>
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<tr>
<td>Through the internet</td>
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<tr>
<td>Through friends</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Through consultants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TV adverts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others please specify:</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

17. Do you use automated system that communicates with your suppliers system automatically?
Yes / No

If Yes which system do you use......................................................
If No why..............................................................................

Level 5: Open System Integration

18. Do you integrate your systems with other external systems electronically, make and receive payments electronically? Yes ( ) or No ( )
If Yes mention some of the means of payment:..............................................
If NO why:..............................................................................

Benefits of E-business Adoption

19. The following questions find your perception on the benefits to the adoption of E-business by SMEs. Please rate by indicating whether you strongly agree (5) Agree (4) Neutral (3) Disagree (2) strongly disagree (1).

<table>
<thead>
<tr>
<th>BENEFITS OF E-BUSINESS ADOPTION</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce cost of business operations.</td>
<td></td>
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<tr>
<td>Easy and fast exchange of documents and information</td>
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<tr>
<td>Improve customer service</td>
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<tr>
<td>Providing customer more satisfying business experience</td>
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</tr>
</tbody>
</table>
Increase the availability of products/services to customers

Improve accessibility to more customers

Support linkage with suppliers

Increase ability to compete

Providing managers better access to information

Support strategic decisions of managers

Support co-operative partnership in the industry

Save time

**Barriers to E-business Adoption**

20. The following questions find your perceptions on the barriers to the adoption of E-business by SMEs. Please rate by indicating whether you Strongly agree (5) Agree (4) Neutral (3) Disagree (2) Strongly Disagree (1)

<table>
<thead>
<tr>
<th>BARRIERS TO E-BUSINESS ADOPTION</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low level of technology usage within the organization</td>
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<tr>
<td>Low level of literary among SME owners</td>
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<tr>
<td>Unconvincing benefits to the organization</td>
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<tr>
<td>Lack of qualified staff to develop and implement and support web sites</td>
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<tr>
<td><strong>Limited resources in terms of finance, computers software and hardware</strong></td>
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<tr>
<td>---------------------------</td>
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<td>---</td>
</tr>
<tr>
<td><strong>High cost of Internet Connectivity and website</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Inadequate transportation and delivery network</strong></td>
<td></td>
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<tr>
<td><strong>Inadequate telecommunication infrastructure such as poor internet connectivity.</strong></td>
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<tr>
<td><strong>Lack of online payment process.</strong></td>
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<tr>
<td><strong>Limited availability of Online Banking Services.</strong></td>
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<tr>
<td><strong>Lack of developed legal and regulatory systems.</strong></td>
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<tr>
<td><strong>Lack of government support.</strong></td>
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<tr>
<td><strong>Lack of popularity for online business transactions</strong></td>
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</tbody>
</table>

**Practical framework on adoption**
The following seeks to find your perceptions on how would want to get started on implementing e-business strategy in your organization. Arrange the order of importance from 1st to the 10th in the adoption.

<table>
<thead>
<tr>
<th>E-BUSINESS ADOPTION FRAME WORK</th>
<th>ORDER OF MERIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buy and sell online</td>
<td></td>
</tr>
<tr>
<td>Make and receive payment online</td>
<td></td>
</tr>
<tr>
<td>Emails to communicate with customers and partners</td>
<td></td>
</tr>
<tr>
<td>Interact on social Network (YouTube, face book, twitter, Skype etc) to attract customers</td>
<td></td>
</tr>
<tr>
<td>Get a computer</td>
<td></td>
</tr>
<tr>
<td>Get a internet modem / broadband</td>
<td></td>
</tr>
<tr>
<td>Create a website</td>
<td></td>
</tr>
<tr>
<td>Advertise products and services online</td>
<td></td>
</tr>
<tr>
<td>Integrate supply chain management in your system</td>
<td></td>
</tr>
<tr>
<td>Fundamental ICT training.</td>
<td></td>
</tr>
</tbody>
</table>