The Role of Technology in Developing Markets: The Experiences and Challenges of Ghana

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ABSTRACT

The digitalization of contemporary markets and societies is the cause of major transformation in modern day technology. This transformation therefore has a positive effect on globalization. The tradition of private sector vibrancy" and "strong mobile and internet backbone" has been a huge part of the e-commerce success in the country. The emerging middle class who are largely tech-savvy and hungry for real price and product discovery" are ready to buy online. However, cyber crime is one of the major challenges facing e-commerce in Ghana. The country has one of the worst reputations for cyber criminality on the continent, leaving many people wary of buying online. It is therefore important for the state to explore regulatory framework to forestall the challenges of cyber criminality that bedevils the country’s current e-commerce platform.

Keywords: e-Commerce, digitalisation, cyber crime, middle class

INTRODUCTION

The digitalization of contemporary markets and societies is the cause of major transformation in modern day technology. This transformation therefore has a positive effect on globalization. The growing number of current entrepreneurs seeking the most effective and least cost method of achieving business objectives has a core theme in national and international retail marketing research (Swinyard & Smith, 2013). The online marketing platform is one of the emerging strategies of market (albeit the risk involved) entry preferred by a significant number of retailers, due to its perceived lower cost for both companies and users (Dawson, 2014). In fact, E-commerce or Online marketing first appeared in 1994, with the on-line sale of Ten Summoner's Tales, Sting's fourth album in USA (Alain Ducass, 2015) and took off with companies such as Amazon, EBay and AOL. After Twenty years, e-commerce is spreading all over the globe, with a volume estimated at USD $1,500 billion in 2014, according to eMarketer (2014). According to the OECD, online marketing business is “the sale or purchase of services or goods, by firms, people, countries, and other private or public organizations performed through electronic devises networks”. In his report, Paulo Bastos (2014) included the illustration of purchases of goods and/or services that are partially conducted over a computer and others devices. Many countries around the world like China have now realized the benefits of ecommerce and they aspire to provide better living conditions to their citizens through online platforms. Indeed the e-commerce industry in China has generated ¥5.16 trillion in 2016, which represents twice the growth rate of the whole retail economy in China and 15.5% of total retail sales in the country. With years of rapid growth and a huge consumer market, China has taken up the largest share of the global online retail market and became the world's largest and fastest-growing e-commerce market. With 36% of its population ordering online at least once a week, China has become the world’s number one online shopping market. According to Specialists from the China’s National Bureau of Statistics, the country will expand the advance it already has on the United States in the
future (CNBS, 2016). As per the International Trade Centre (ITC, 2015), the growth of e-commerce can be exemplified by the emergence of platform providers that serve as the link between retailers and consumers. This is all thanks to the country’s introduction of ecommerce platform services as a means of improving living conditions for the citizens, and increasing effectiveness within businesses (Mohammed, 2012). Unfortunately, Africa and the Middle East still find themselves in a marginal position.

Digitalization of Contemporary Markets

The United Nations Conference on Trade and Development has confirmed that, with about 2.2% of global B2C e-commerce in 2013; Africa remains the region with the lowest e-commerce penetration (UNCTAD 2015; Alain Ducass 2015). In regards to The International Trade Centre (ITC, 2015) the current share of e-commerce consumption by African enterprises is below 2%. It however has enormous potential to become a significant part of the economic growth and activity of countries throughout Africa (ITC, 2015). By the close of 2018, the African e-commerce market is projected to soar to US$ 50 billion, from US$ 8 billion in 2013 (Alain Ducass 2015). E-commerce therefore holds great promise in enabling buyers and sellers from developing countries, especially in Africa, to win the benefits of global markets. There are more than 3 billion people using the Internet; two billion of them are in developing countries (ITC, 2015). A McKinsey & Company in its report (July 2014) indicated that e-commerce could account for 10% of retail sales in Africa’s largest economies by 2025, which would translate into US$ 75 billion in annual revenue. Nonetheless, the success of such initiatives is dependent not only on public sectors and businesses, but also on citizens willing to accept, use and adopt ecommerce platforms services (Delone, 2005). In addition, the adoption of e-commerce platforms services raises important political, technological, social, cultural and economical issues which must be considered and treated by any online platforms owners contemplating its adoption. In West Africa online business took off in 2015, with the symposium held on the 8th and 9th of October in Abidjan, Ghana; producing the Africa Telecom People forum (Alain Ducass, 2015). Since then, the ecosystem of e-commerce is emerging and evolving in Ghana. Ivorians are progressively getting used to electronic transactions, and the demand for it is rising. With the development of start-ups, e-commerce has become a part of the daily lives of people living in Ghana. These start-ups seek to offer everyday consumer goods and services to Ivorians, using a variety of devices to facilitate payment and supply. Beside Nigeria which is Africa’s largest economy in terms of nominal GDP and one of the leading African e-commerce markets, with its 175-million population, 60 million enjoy regular access to the Internet and from the 65% of the 60 million have shopped online (ITC, 2015); Ghana is the second country in West Africa, with a high economic potential; and growing perspectives are positive (9% per Year), both in the short and medium terms (World Bank, 2016) viewed as a “champion” in a region where the economic climate is morose.

After gaining their independence, several African countries have seen a growth in the tertiary sector. In Ghana Services account for 48% of the GDP and employ over 22% of its active population (Alain Ducass, 2015). The telecommunications sector is the most activity driven booming sector, with other sectors aiding the growth of its service. According to the annual report of the (World Economic, 2015) Forum of the Global competitiveness of 2015-2016, the World Economic Forum ranked Ghana 91st out of 140 countries. In accordance with this result, Ghana is doing mildly better than the African average. The country has a relatively good telecommunications infrastructure and a growing Internet market that has laid the groundwork for further development of e-commerce.

Over the last five years, the quantity of digital devices linked to the Internet has significantly increased, and this increase is expected to accelerate. It is estimated that in the coming years, around 37.45% of the population in Ghana will have access to the internet, which is far than the estimation of 2013 (Ministry of Telecom, 2013). In this era of digital technology, the internet accounts for much of this growth. More recent anecdotal evidence indicates that Internet penetration has continued to climb sharply.

For years, Côte d’Ivoire was banned from access to PayPal due to fraud risks (Alain Ducass, 2015). In 2014, MTN teamed up with the first online retail website, Jumia (www.jumia.ci) to offer a widespread service to users both online and on mobile devices. In practice, the access was limited to only purchasing and sending money. However, this sanction was lifted in June 2014. As of present, more than ten online retail shopping websites platforms have opened in Ghana (Alain Ducass, 2015), which increased the number of Ivorian users. Côte d’Ivoire according to (ARTCI, 2013) remains a regional hub for e-Commerce as well. WAEMU headquartered its Interbank Electronic Banking Group (Groupement
Inter bancaire Monétique_GIM-UEMOA) in Abidjan, and Côte d’Ivoire accounts for over 40% of its activity (Olubenga Adesida, 2001). It is standardizing many operations, such as e-payment, internet payment of taxes and utility bills and so on. These technology oriented markets are rapidly opting for newer trends in technology. With its new dynamics and in transforming the Ivorian consumer market, it has become more important than ever, to understand technology adoption in this young developing country. Facing alternative options, we must take careful measures in analyzing the prospects of adopting e-commerce platforms in Ghana.

**Trends of e-commerce adoption on developing countries**

“National strategies need to concentrate on real e-issues facing small firms, so that they can benefit from information and communications technologies” (O Alos, 2005) Trends in e-commerce in countries are different and face different challenges because no two countries have the same level of infrastructures and manpower to facilitate the adoption on an equal basis. UNCTAD, 2004 report confirms that “E-business continues to grow vigorously in developed countries, but divergences are surfacing among developing countries”. According to the Economic Intelligence Unit (EIU), areas ranked high for e-commerce are North America and Western Europe because of the availability of well developed technical infrastructures. On the other end, areas like Africa, the Middle East and Latin America are still lagging behind because quality and availability of these infrastructures have not been put in place by the appropriate bodies (Chaffey D, 2007). The Information Economy Report, 2006, says “there are large differences between developed countries, where broadband is growing rapidly, and developing countries, where dial-up Internet connections are still prevalent and networks and internet work connections are very poor.” It was also mentioned that in developed countries, broadband users increased by almost 15 percent halfway in the year 2005; reaching 158 million. The Internet enables companies to engage in more sophisticated e-business processes and deliver a greater range of products and services, thus maximizing the benefits of information and communication technology (ICT). In this thesis, countries will be sub-divided into developed and developing countries.

**Importance of e-Commerce Adoption in Côte d'Ivoire**

The term e-commerce has caught the attention of most scholars in the business world following the fast rate at which it is mushrooming and has been defined by different researchers. (Lawrence et al 1999) defines e-commerce as the buying and selling of information, products and services via computers, telecommunication networks and streamlined work processes. Also, according to (O Alos, 2005), the concept can be defined as “a technology-mediated exchange between parties (individuals or organizations) as well as the electronically based intra or inter organizational activities that facilitate such exchanges”. This is inarguably the basis of success stories for many organizations, in that adopting e-commerce provides a front-end tradition for these organizations; making new products and services more reachable and marketable all around the globe (Chaffey D, 2009). E-commerce has the potential to become a source of competitive advantage to every sector in a country’s economy because of its cost effective way of accessing customers globally. Scholars (Chaffey D, 2007), (Chaffey D, 2009) have shown that e-commerce brings with it a radical change in the way organizations do business.

Companies adopt different forms of e-commerce to meet their needs. To discuss a few; Business to Business (B2B) is a form of e-commerce which involves buying and selling of information and services over the internet among businesses or business partners (Ralph M, al, 2003). Business to Customers (B2C) is another which describes online trading or auctions and it involves the interaction between businesses and customers. One of the best examples of this type of e-commerce is Amazon.com (Ralph M, al, 2003). Customer to Customer (C2C) is another type of e-commerce transaction that involves a customer transacting business with another customer through a third party. An example of this is eBay.com and this type of e-commerce is commonly referred to as Peer-to-Peer. Other forms include Business to Government (B2G), Customer to Business (C2B), and Government to Government (G2G) (Lawrence et al 1999). Therefore, e-commerce adoption is found to have had a significant role in its contribution to the national economy in terms of wealth creation and the number of jobs created in developed and developing countries (Chaffey D, 2007).

**Motivation**

The term ‘motivation’ is generally understood to mean the reason behind the occurrence of a given behavior (Moisander, 2007). Motives can both be overt and hidden; that is to say, consumers may or
may not be aware of their motives for a given behavior (Moisander, 2007). According to (Kollmuss, 2002), a distinction can be made between two types of motives: primary motives (the larger motives that let us engage in a whole set of behaviors) and selective motives (motives that influence specific actions). Motivation is seen as one of the most important factors in consumer’s choice of adoption of Ecommerce platforms. A decision to purchase on online platforms may be motivated by both personal (e.g. personal health) and public reason (e.g., purchasing an eco-friendly product in order to support the environmentally responsible behaviors usually involves difficult motivational conflicts, arising from the fundamental incompatibility of environmental protection-related to collective goals and individual consumers’ personal or self-interested benefits). Despite the existence of different interpretation of the role, motivation is generally considered as a strong internal stimulus around which behavior is organized (Kollmuss, 2002). Over the years various research works have been conducted to better our understanding of the relationship between motivation and behavior. Griskevicius and Kenrick (2013), investigated the underlying motives for consumer choice behavior from an evolutionary perspective and concluded that a person’s preferences, behaviors, and decision processes change in predictable ways depending on which fundamental motives are active. In the study of Huang et al. (2014), it was established that environmental clients in the tourism/hotel industry were motivated by their intrinsic support for the environment and extrinsic motivation for cash discounts (Joseph, 2015).

**Political Factor Affecting E-commerce**

It has been recognized that Ecommerce platforms can only take place when the necessary infrastructure is provided (e.g. Internet availabilities). The poorer a service is the less likely people are to use it (Kollmuss & Agyeman, 2002). The literature on Ecommerce platform practices has often underscored the difficulties people encounter in trying to be Ecommerce consumers. Ecommerce practice requires not only a strong commitment to internet issues, but also entails a substantial resources on the part of the consumer (e.g. financial means and knowledge) and the opportunity to actually engage in this form of acceptance of behavior (Fuentes, 2014). Cleary, political factors play an important role in acceptance of Ecommerce platform practices. However, how to mainstream the political factors to be effective in this concern is not an easy task. It requires a concerted effort from both the public and private sector organizations. In terms of mobilizing the required material resources, human, (Lorek, 2014) have emphasized on the importance of this role. Indeed the political governance system or the regulatory that pertains to a particular country have to influence the Ecommerce adoption. In this respect, Schroeder (2014), discussed the effectiveness of governance approach and effort to make promotion of adoption of especial behavior by the consumers in the Chinese context; and highlighted the advantage of the top down approach.

Because Ecommerce is still new in age in Africa unlike other business eras; it will need government support to reach a competitive edge against other large organizations. National governments must set up different agencies to look into the various problems with Ecommerce in the country. Governments can provide an enabling environment in which e-commerce can reach its full potential. They can help address the problems and challenges of awareness and infrastructure underdevelopment (Chaffey D, 2007), (Ralph M, 2003), (T. Alemayehu, 2005). In their research on e-commerce adoption, SMEs found that the most important factors contributing to the non-adoption of electronic commerce in Egypt are the limited awareness of the technology, poor telecommunication infrastructures and most importantly poor government funding. The study, also suggests that e-commerce if adopted by SMEs, could enable the country gaining a more open economy and will increase its competitive advantage worldwide. In developed economies, governments have been able to prioritize the improvement of infrastructure and the upgrading of skills necessary to participate effectively in the restructuring of e-commerce adoptions in these countries (UNCTAD, 2004-2006). China, a developing economy has been able to make a significant growth in overcoming the barriers to establishing e-commerce in businesses (Ralph M, 2003), stating that adequate government support and policies put in place have been able to record a significant growth of e-commerce adoption.

**Economic Factor Affecting E-commerce**

A common thread among researchers in Africa, especially in Ghana is that E-Commerce is an innovation in which parties interact electronically. The benefits of E-commerce have been well documented in literature (Ojukwu, 2007). However, there has been little reported on the success of adoption and institutionalization of E-Commerce in Africa (Ghobakhloo, 2015), and in Ghana in particular. According to Kollmuss and Agyeman (2002), economic factors can have a very strong
influence on people’s acceptance of a technology. However, the relationship between economic factors and consumer expected behavior are very complex and poorly understood. Consumers may behave differently under a similar economic environment. For instance, (Tsourgiannis, 2014) identified three types of consumers: (1)” Opportunists” or consumers who are not influenced by any national economic consideration in their buying decision behavior; (2)” influenced by psychological issues”, or consumers who were largely influenced by curiosity and prestige associated with patronizing certain products and (3)” National economy supporters” or consumers who preferred domestically produced shoes in China because they wanted to contribute to the economy of the particular nation. (UNCTAD, 2004) report confirms that “E-business continues to grow vigorously in developed countries, but divergences are surfacing among developing countries”. While research is yet to fully comprehend the role of factors in influencing consumer acceptance behavior, it is clearly a very important factor to consider when designing new strategies and policies to modify and definitively influence people acceptance behavior on ecommerce adoption; particularly in Africa.

Socio-cultural Factors Affecting E-commerce

Socio-cultural factors plays an important roles in people adopting (Kollmus, 2002) Ecommerce platforms in Ghana. It has also been showcased that people may adopt a particular service or product because they provide benefits but such service can as well, be used to express their association or affiliation (Kim, 2002). As globalization continues to evolve, cultural identity will continue to be at the center of consumer culture research (Strizhakova, 2013). The adoption of e-commerce is also reliant on its acceptance by business owners. (Curtis G, 2005) in his research said “If business owners do not perceive the technology to be useful, nor understand its potential, then he/she will be reluctant to adopt it”. This is a very popular reason for not adopting e-commerce in businesses, as the low level of computer literacy of owners and a lack of knowledge on how to use the technology, result in the business being less likely to adopt e-commerce. For most businesses in developing countries, they generally operate on a hierarchical basis of operation and the chain of command starts at the top. In this view, owners of businesses, i.e. individuals with power and authority to make strategic decisions for an organization; once feeling that e-commerce is unsuitable to their businesses, will rather not adopt it. However, acceptance and involvement of top management in organizations of businesses has always been the turning point for various organizations in developed countries. (UNCTAD, 2004-2006) Top management supports have been identified as very crucial in the acquisition and diffusion of innovation within businesses in developing countries (Turban Eatal, 2010).

Technological Factors Affecting E-commerce

Ecommerce knowledge as a term is commonly used to mean knowledge and awareness about Internet businesses problems and possible solutions to those problems (UNCTAD, 2004-2006). The advancement of e-commerce provides it with the suitability for business fostering and value creation described by Pearson and Saunders (2006) as the backbone for business where transactions happen instantly over communication medium without paperwork. There are some unique features of e-commerce technology that enhance companies and transform the traditional way of doing business and they are: ubiquity, global reach, universal standard, richness, interactivity, information density and personality/customization (A Josang, 2007). Ubiquity in e-commerce allows customers to perform transactions almost from anywhere in the global sphere. Global reach describes the expansion of transactions over crossing national boundaries, as it is more convenient than the traditional way of doing business. It also enhances the probability of reaching out to more customers worldwide. Universal standards explain the ability of e-commerce to pursue a general standard of merchandise with their maintenance at lower prices. Richness on the other hand makes markets, through information provided, more powerful within their selling and commercial environments. Interactivity explains the ability of e-commerce to help provide effective communication between merchants and customers through cheaper and faster means. Information density in e-commerce makes possible the location of relevant product information faster; and Personalization/Customization in e-commerce helps businesses to tailor the advance technology to suit their business and to provide customized product and services for individuals (A Josang, 2007). All these reveal the fact that e-commerce has changed the traditional way of doing business across the globe. The use of appropriate information and communication technologies (ICT) is a basic requirement to participate in e-commerce. Today the internet is the basic platform for transaction of e-commerce (chaffey D, 2007). Research then shows that larger organizations i.e. multinationals are the ones that benefit from e-commerce adoption while
small organizations and businesses seem to lag behind because of a vast majority of barriers associated with them (Van Toorn, 2006). As described by (Van Toorn, 2006) in a conference paper, the researchers identified some of the barriers to e-commerce adoption and have divided them into internal or external barriers. They are explained as follows: Internal Barriers - Security, Lack of technical Knowledge, Owners characteristics. External Barriers - Lack of government support. These barriers are further addressed below. Lack of technical knowledge is a situation where there is a lack of expertise and professional knowledge in an organization, as people are not always aware of technical developments regarding the adoption of e-commerce in a country. Chaffey, (Chaffey D, 2007), concludes that the main barriers to the use of ICT and e-commerce in businesses are the lack of knowledge about the advantages of the technology and what value it could add to their businesses. In developing countries, lack of technical knowledge and specialized know-how are obvious barriers which prevent businesses from implementing e-commerce systems. Businesses that intend and want to reach new clients in the business-to-consumer field have to undertake extensive marketing efforts and build a relatively good website. The low personnel of network and internet specialists in the labor market only makes this difficult to achieve, as these are rampant problems to both internal and external compartments in these organizations. In a recent report, South Africa which is a developing country has put in place policies to facilitate its employer’s access to the international market for computer specialists (UNCTAD, 2004-2006). This has been done to help the nation boost its lack of technical specialists and in turn add to the values needed by organizations in the country.

This explains a lack of adequate security measures in the adoption of e-commerce; some organizations are not fully established not to mention lacking full security infrastructures exclusive to their businesses. (Turban et al, 2010) confirms the reason for Ghana not using e-commerce is due to the security problems attributed to e-commerce adoption. (Chaffey D, 2007), found that lack of sufficient security systems, reliability, standards and communication protocols are major complaints with websites holding vital information. Internet security problems has been found to take different forms, ranging from spam, viruses, fraud, privacy infringement, harassment, and denial of service and unauthorized entry into corporate or personal computers and networks (UNCTAD , 2004-2006). In Ghana, regarding security of data transfer and the danger of fraud, it is a heavy and lurking fundamental concern for a large number of organizations in the country’s population and the economy’s decision in not adopting e-commerce. Developing countries in general are the leading victims of attacks against government online systems, although such attacks are less frequent than those against businesses (UNCTAD, 2004-2006). In Ghana, the major factor affecting the development of e-commerce has been the perception of poor security issues associated with payment methods and network reliance, showing that business associates in Ghana still worry about transmitting their credit card information over the internet making security a unique problem in the country (SK Katsikas, at al 2006). Therefore, measures which build trust in the internet as a medium for transactions are urgently needed in developing countries. In Ghana, the Government has done pioneering work with the starting up of regulatory bodies to look into the overall problems affecting companies with security as a prime factor to tackle. Finally, UNCTADs e-commerce report in 2004, recommended that priorities in these areas should include identification of risks and critical vulnerabilities, reinforcement of international and cross-border cooperation, promoting education and the best practices.

CONCLUSION
As indicated in earlier section of the study, the digitalization of contemporary markets and societies is the cause of major transformation in modern day technology. This transformation therefore has a positive effect on globalization. The tradition of private sector vibrancy" and "strong mobile and internet backbone" has been a huge part of the e-commerce success in the country. The emerging middle class who are largely tech-savvy and hungry for real price and product discovery" are ready to buy online. However, cyber crime is one of the major challenges facing e-commerce in Ghana. The country has one of the worst reputations for cyber criminality on the continent, leaving many people wary of buying online. It is therefore important for the state to explore regulatory framework to forestall the challenges of cyber criminality that bedevils the country’s current e-commerce platform.

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