

# Ict Adoption in Small and Medium Scale Enterprises in Nigeria:An Assessment

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## Abstract

*Information Communication Technology is a veritable tool for Small and Medium Enterprises growth and development in Nigeria. All over the world, ICT has transformed the manner in which companies conduct business. However, there is no evidence to show that SMEs have reaped the full benefits offered by ICT adoption as compared to developed countries. This paper reviews literature on ICT and SMEs. It also highlights some factors hampering adoption of ICT in SMEs and solutions to Small and Medium Enterprises in Nigeria. The paper concludes that government should provide ICT infrastructure and enabling environment for SMEs in Nigeria. Also, government and financial authorities should initiate new policies such as provision of capital and support services to SMEs.*

## Keyword:

information communication on technology small and medium enterprises, information system ICT adoption ICT solution, growth and development.

## Introduction

In recent years the adoption of Information Communication Technology by SMEs operators has significantly changed the manner in which organization operation and communicates. ICT plays a crucial role in the present knowledge based economy and is applied in a wide range of areas in organization (Apulu, 2012).

Ashrafi and Murtaza (2005) state that organization around the globe are now utilizing ICT not just for cutting costs and improving efficiency, but also for providing better customer service. According to Spanos et al. (2002), buyers and sellers are able to share information and transfer goods across national borders with the use of ICT, which helps to increase access to global supply chains.

The effective use of ICT remains at central stage in facilitating the change growth of enterprises. Many small and medium enterprises (SMEs) consider enabler to their development (Dixon et al., 2002).

Also, the increasing awareness and appreciation that ICTs impact on Educational development, economy

development through the expansion and growth of Small and Medium enterprises (SMEs) improvement in governance, environmental monitoring, health security and human rights promotion to mention just a few has further brought ICTs to the fore in development discourse. The benefits arising from innovative technological solutions, products and services have therefore transformed and opened up new avenues for Small and Medium Scale Entrepreneurs and government to work together to eradicate poverty, promote sustainable human development, accelerate economic growth and facilitate integration of many countries into the global economy (Usman, 2010).

The adoption of ICT is crucial to SMEs as ICT has become a major catalyst and enabler of organizational change (Hazbo et al, 2008). SMEs in Nigeria have not been able to effectively take advantage of this potential market because of the “digital divide” that exists in Nigeria being a developing nation. The digital divide is the gap between “ICT haves” and “ICT have nots” a tool to take advantage of information and knowledge; ICT is increasingly becoming a foundation of any societies and economies (Kusoro, 2013). Apulu and Latham (2009) note that there is a variation in adoption of ICT solutions between the developed nations and the developing nations. The developing nation like Nigeria and Mali are adopting such solutions at a slower rate of because the technology is not developed to directly meet the need of developing countries. Thus, there is need for ICT solution developed for developing nations by the people of the developing

nations to meet their specific and unique need (Apulu and Ige, 2011). It is on this note that this paper reviews literature on ICT adoption, some factors affecting its adoption, and ICT solutions to SMEs in Nigeria.

## Literature Review

### Small and Medium Sized Enterprise (SMEs)

SMEs are generally distinguished by the nature of their production and management arrangements, trading relations, financial, practices and internal competence (Ongori and Migiro, 2010). National Association of Small and Medium Scale Enterprises defines SMEs as “business employing less than 50 people and with an annual turnover of one hundred million Naira”. Also, the Central Bank of Nigeria and the Small and the Medium Enterprises Equity Investment Scheme define SMEs as “any enterprise with a maximum asset base of two hundred million Naira excluding land and working capital with its employees ranging between ten and three hundred . According to Hudson et al (2001), SMEs may be differentiated from larger companies by a number of key characteristics such as personalized management with little devaluation of authority, severe records limitations in terms of management and manpower, as well as finance, reliance on a small number of customers, flexible structures, high innovating potential, reactive, fire-fighting mentality and informal dynamic strategies.

Gholami et al. (2010) regards SMEs as firms that have fewer employers and a

lower annual turnover and assets than large firms such as multi-national companies. The authors state that in SMEs decision-making is centralized and key decisions such as IT adoption are made solely by high authority individual in the firm such as this chief executive officer or information system (IS) manager. However, there have been numerous reports on SMEs lacking in resources, experience, skills and knowledge often placing SMEs at a disadvantage when competing with big companies in a globalised world (Bell et al, 2014). Bruque and Moyano (2007) advocate that SMEs face greater risks in IS implementation than large firms due to few or resources and limited education about information system.

According to Akunyili (2010), ICT can be defined as an umbrella term that covers all technical means for processing and communication information. Ashrafi and Murtaza, (2008) refer to ICT as any technology that enable communication and electronic capturing, processing and transmission of information. These technologies include products and services such as desktop computers, laptops, hand held devices devices, wired or wireless internet business productivity software such as text editor and spread sheet, enterprise software, data storage and security and so on. Modern ICTs such as software, internet, fax, emails, and mobilephones have become available to many countries of the world in recent years and they are effective means of communicating knowledge and information to rural agricultural communities (Richardson, 1997: Kweku, 2006).

### **Ict Adoption in SMEs**

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According to Turan and Urkmez (2010), adopting new technologies is very important in initiating the movement toward higher quality and competitiveness in the world of SMEs. It is widely seen as critical for the competitiveness of SMEs in the emerging global market and has resulted in more effective use of time.

Moreover, Hazbo (2008) argues that ICT has become a major catalyst and enabler of organizational change. Ashrafi and Murtaza (2010) assert that ICT helps SMEs to enter new markets, supply new products and services increase their added value, change business processes increase performance and productivity of the organization, employ new business channels and provide a rapid response to competitors' activities. Levy et al (2002) also posits that SMEs can act proactively in relation to the use of ICT.

In addition, the use of ICT enables SMEs to partake in knowledge economy and offers enormous opportunities to narrow the social and economic inequalities that will assist SMEs in achieving broader development goals (United Nations, 20017) Beekhuyzen (2005) believes that access to ICT continue to be a global problem especially in developing countries. Sahlfeld (2007) reinstates that there is no indication that the benefit of ICT experienced by development countries, such as reduced business costs and increased access to information, would not also amass to that of developing countries.

Also, Golding et al (2008) affirms that there is a digital divided which shows

that ICT adaptations vary between developed and developing countries with developing countries adoption ICT at a slower rate due to several challenges hampering the adoption.

### **Factors Affecting ICT Adoption in Nigeria**

Nigeria is one of the developing nations of the world where most people have a low income and low standard of living with less access to goods and services as compared to most people in higher-income countries (Leslie and Gaskill, 2006).

Woherem (1993) notes that the lack of skilled human resources is a principal barrier blocking the diffusion and effective utilization of ICT in developing countries. Kunda and Brooks (2000) also states that the operational problems are faced by developing countries due to technical and economic constraints which include the non-existences or reliable background statistical information and inadequate capital to financing ICT and lack of skilled personnel.

Adenikinju (2005), Akpan-Obong (2007), LaI (2007) and Apulu et al (2011) amongst others have identified one or more factors that affect the adoption of ICT in various sectors in Nigeria, including SMEs. These factors include: lack of infrastructural

facilities, lack of funds, lack of awareness, lack of appropriate government policies, lack of skills and training, cultural factors, electricity constraints, corruption low levels of education, illiteracy, lack of access to information and so on.

Achimugu et al (2009), Lal (2007), Ihua (2009), Oshikoya and Hussain (2007) state that lack of physical infrastructures and or environment are barriers of ICT adoption in Nigeria.

Arendt (2008) and Abor (2010) argue that lack of skills and capital are the major challenges hampering ICT adoption SMEs in Nigeria.

Furthermore, an electricity constraint is one of the factors that affects the adoption of ICT amongst Nigerian Institutions (Agyeman, 2000) including SMEs. Baker (2008) assert that Nigeria is the largest oil producer in Africa and holds approximately one third of the given gas reserves in African but lack of power supply has remained a major problem in the country.

The table below shows factors hampering ICT adoption in SMEs in Nigeria.

**Table 3.1: Factors hampering ICT Adoption in Nigerian SMEs**

<b>Factors</b>	<b>Related Literature</b>
Cultural barriers	Adenikinju (2005)
Lack of telecommunication infrastructure	Akpan-Obong (2007) ) Oshikoya and Hussain (2007)
Lack of infrastructural facilities	Adenikinju (2005) Apulu et al (2011) Achimugu et al (2009) Chibundi (2006); Ihua (2009); Lal (2007); Mambula (2004)
Corruption	Obayelu (2007); Ayobolu (2006); Dike (2005); Ochulor and Bassey (2010)
Low level of Education	Olatokun (2006) Apulu et al (2011)
Lack of skills and training; technological background	Mambula (2004); Apulu and Latham (2009c)
Cost of implementation	Folorunso et al (2006)
Lack of capital	Abor and Quartey (2010)
Lack of support from banks	Apulu et al (2011)
Electricity constraint	Agyeman (2007); Akpan–Obong (2007); Olatokun (2006)
Lack of support from the government; lack of regulatory policies; institutional framework	Apulu and Ige (2011); Apulu et al (2011); Baro (2011); Adeye and Iweha (2005)

**Source: Apulu (2012)**

### ICT Solutions to Nigerian SMEs

ICT is one of the main drivers of change in organization (Adebambo and Toyin, 2011). ICT helps SMEs cut cost by improving their products through faster communication with their customers and better promoting and distributing their products through online presence (Kuyora and Awodele O. (2013).

Also ICT solution helps SMEs in increasing their productivity and achieving higher business performance (Ongori, 2010).

Some empirical studies by Apulu (2013), Irefin (2012) and Tijani (2012) have confirmed the positive effect of ICT on firm performance in terms of productivity profitability, market value and market share. The findings also reveal that ICT has some effect in terms of intermediate performance measures such as process efficiency service quality cost savings organization and process flexibility and customer satisfaction (Kuyora et al, 2013).

Also, moreover, it is necessary for Nigerian government to develop ICT model

that will assist Nigerian SMEs to successfully adopt ICT and technological infrastructures should be put in place by the government to support ICT an adoption, Finally, Nigerian government should make more funds available to SMEs and put some structure in place in order to ensure a successful investment.

### Conclusion

Information Communication Technology plays a very important role in helping SMEs to create business opportunities and to combat pressures from competition. The adoption of ICT is hampered by a lot of factors in Nigeria. This paper only discussed the literature review on SMEs and ICT it also highlighted the adoption of ICT in SMEs, some factors affecting its adoption and ICT solution to Nigeria SMEs.

### Recommendations

Based on the finding of this study it is recommended that:

1. Government should boost SMEs capacity in Nigeria by providing workable funding and affordable long term financing.
2. Government should expand electricity infrastructure and develop legal and regulatory framework to aid private sector participation.
3. Government should provide enabling environment for SMEs by involving SMEs in policy formulating

and execution and train indigenous small and medium scale entrepreneurs.

4. Internet service providers should increase bandwidth to enhance intermediate service

and reduce the price of width.

5. Government should legislate and act against corrupt practices.

6. Government and financial authorities should initiate new policies for SMEs support and introduce a regulatory policy for micro finance banks owner mangers.

7. Government should conduct training sessions for employers in SMEs and identify the

skills required for success.

8. Owner-managers should acquire ICT skills and increases awareness of the potentials of

ICT.

9. Government should initiate programmes to increase owner-managers awareness by emphasizing the importance of managerial skills and knowledge on ICT adoption and utilization.

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