ABSTRACT
Unemployment among school leavers and graduates of tertiary institutions have been a bane causing death of marketable skills and skills mismatch in Nigeria, besides restiveness and other social vices. Information and communication technologies (ICTs) have been increasingly promoted as a key solution for comprehensive development, poverty alleviation and the empowerment of historically disadvantaged groups. ICT-based business initiatives have been hailed as “potential goldmines; hence the need for acquisition of functional and marketable skills, especially in ICT and related modern skills, becomes indisputably imperative. The benefits have far-reaching consequences for the economic and social development of a country, as ICT businesses can foster new avenues for education, communication and information sharing; increased productivity and speed of work; improved accuracy as computers tend to make fewer mistakes than humans; faster communication; and savings in labour costs since fewer workers may be required. This paper, motivated by the potentially powerful role that ICTs can play in the empowerment of the unemployed, poor and underdeveloped individuals in Nigeria, is an attempt to suggest possible ICT initiatives that can be used to create self-sustainable enterprises and entrepreneurs. It is anticipated that the insights developed in this study would be useful both for purposes of policy formulation and effective programme- and self- development.

Keywords - Enterprise Creation, Training, Skill-Acquisition, Seed-Money and Empowerment.

1. INTRODUCTION

The emergence of new technologies in the last quarter of the 20th century brought with it the wave of technological advances in developing countries. These advances somewhat gained influence into the under-developed countries through ‘technological mobility’ which is a vehicle for skill acquisition in these ever-changing environments.

Enterprise creation — a product of skill acquisition — is a major feature of interest in promoting economic development of a country. In Nigeria, the focus of some government agencies has been the promotion of skills acquisition through training of clients (varying from secondary school leavers, young graduates, to informal sectors) in order to empower them to become entrepreneurs. Creating an enterprise goes a long way to eradicate major obstacles in the lives of many, and in advancing the economic growth of a nation.

The influence of Information and Communication Technology (ICT) in today’s ever-changing environment cannot be over emphasized. With proven statistics from different countries, creating enterprises through ICT initiatives has seen great successes from the informal sector to the formal sector of the economies. ICTs are increasingly being promoted as a key solution for comprehensive development, poverty alleviation and the empowerment of historically disadvantaged groups, such as women and minorities in the Global South (Bhatnagar and Schware, 2000; Friedman, 2005; Heeks, 1999; Huyer and Mitter, 2003; UNCTAD, 2002; International Telecommunication Union, 2005).

This paper, motivated by the potentially powerful role that ICTs can play in the empowerment of the unemployed, poor and underdeveloped individuals in Nigeria, is an attempt to suggest possible ICT initiatives that can be used to create self-sustainable enterprises. It is anticipated that the insights developed in this study would be useful both for purposes of policy formulation and effective programme- and self- development.

2. RELATED LITERATURE

It is often argued that ICTs can have a levelling effect, giving poor countries access to markets, information, and other resources that would otherwise have been inaccessible. ICTs have the potential to improve efficiency and productivity in many areas and, therefore, have received significant attention and investment in many countries (Tar and Lawrence, 2011). An International Telecommunication Union (ITU) (2005) study describes ICTs as potentially powerful “development enablers” being cost-effective with significant transformative power; allowing developing countries to leapfrog several stages of the development process; furnishing individuals directly with tools for self-empowerment; and avoiding top-heavy and corrupt bureaucracies (Heeks, 1999; Karake-Shalhoub and Al Qasimi, 2006).

Specifically, Eggleston et al. (2002) argue that ICTs “can enhance the functioning of markets that are critical for the well-being of the poor” because ICTs can foster greater market integration in many ways, including:

- They allow firms and individuals in developing countries to participate more competitively and with greater ease in the
regional, national and global economies, and reduce uncertainty in doing business;
- Information regarding prices enables producers to plan their product-mix and input purchases in an efficient manner;
- Access to ICTs allows producers to sell their products in the most portable markets and determine the optimum timing of sale;
- Availability of price information shrinks the informational asymmetry between the rural producers and middlemen; thus reducing the exploitation of the former by the latter;
- Increased information facilitates technology diffusion, adoption and innovation at a much faster pace;
- Increased information about the availability of jobs could result in better and faster matching between landless labourers and available jobs, ultimately leading to increased productivity;
- ICTs can be a valuable tool for the organization and mobilization of gender advocacy and interest groups (Friedman, 2005);
- Education and information increase knowledge about the world and the political, economic, social and cultural factors that shape lives.

3. BEST PRACTICES IN ICTS

Best practices in ICTs can be classified into training and empowerment, expanding market access and generating profit-making opportunities, government and institutional support, societal involvement, and appropriate managerial practices. New technologies and digital media have made significant progress and generated impact and improvement on the conditions for learning in education and training (Carlberg, 2010). ICT and business-related training, geared towards successful execution of projects, and the virtuous cycle of economic independence are key drivers to empowerment. ICTs also facilitate greater and wider market access, better information, and elimination of the middleman; thus positively impacting on the cost structure of business enterprise. Governments and supporting institutions have an important role to play in providing the initial momentum and continual support for succeeding/successful projects as they often provide the necessary infrastructure and are also a large part of the client business’ customer base.

Finally, sound managerial practices such as a participatory management style, a strong commitment to remaining in the business, good business reputation and good public relations are all key success factors for ICT businesses.

3.1 Business Challenges in Enterprise Creation

The key business problem faced by intending small-scale (i.e., micro-) entrepreneurs is their inability to raise initial or take-off capital. The problem is further compounded by their lack of information regarding sources of, and procedures for obtaining necessary loans for seed-money, and/or the assurance of consistent funding for existing projects. This challenge becomes even more evident as Micro Finance Banks, whose aims are to fund micro enterprises, are affected by the result of little turnover from micro enterprises. Also, factors that are necessary to promote progress are subjected to various environmental hassles which reduce, to the barest minimum, the drive for these banks to support micro enterprises.

A challenge faced by micro enterprises in the rural areas is the issue of non-availability of Micro Finance Banks in their domains. Most Micro Finance Banks are located in urban regions where opportunities abound for micro enterprises to thrive, and the banks having more potential of realising high turnover and making appreciable profit. These and other factors affecting enterprise creation can be addressed by agencies with different initiatives through the use of ICT tools.

3.2 Enterprise Creation through ICT

Despite the challenges, with adequate training and creation of enabling environment, ICT-based businesses can thrive in Nigeria. Some potential areas of ICT in enterprise-creation in Nigeria include the following:

- The availability of price information shrinks the informational asymmetry between the rural producers and middlemen; thus reducing the exploitation of the former by the latter.
- Increased information facilitates technology diffusion, adoption and innovation at a much faster pace.
- Increased information about the availability of jobs could result in better and faster matching between landless labourers and available jobs, ultimately leading to increased productivity.
- ICTs can be a valuable tool for the organization and mobilization of gender advocacy and interest groups (Friedman, 2005).
- Education and information increase knowledge about the world and the political, economic, social and cultural factors that shape lives.

Opportunities that ICTs can provide for empowerment are vibrant and wide-ranging. A European Commission Staff Working Document (2012), states that ICTs help improve business development and growth across all sectors thus creating further employment. According to Kelkar and Nathan (2002), information technologies (ITs) have the potential to “redefine traditional gender roles”, and “the spread of IT-enabled services have been immensely beneficial to both women and men, especially those who have limited skills or lack of resources to invest in higher education”. Drucker (2001) called ICTs the “great equalizer” and pioneers in the field of gender empowerment, both in academia and advocacy. Hafkin and Taggert (2001), Huyer and Mitter (2003), and Sharma (2004) have convincingly shown that access to, and effective use of ICTs, contribute to empowerment and capacity building in numerous ways, namely:

- Building of marketable skills through training in the use and design of computer applications, such as e-mail, word-processing and design applications.
- Marketable skills create alternative possibilities for income generation and the possibility of upward mobility.
- An independent income is the basis for individual autonomy, increased agency and control, and frequently, increased self-esteem and self-confidence (Huyer, 2002). The Economist quotes a female volunteer who helps run an ICT-based “Knowledge Center” in Embalam near Pondicherry in India as attesting that the status of women in Embalam has improved as a result of using the computers. “Before, we were just sitting at home; now we feel empowered and more in control” she says;
- Increased agency and self-confidence allow people to travel more and develop a wider network of contacts. Such travel and networking expose them to the availability of more economic opportunities (Eggleston et al, 2002; Rice, 2003; Kenny, 2002; Bayes et al, 1999);
- ICTs open new avenues for education, communication and information sharing;
- ICTs can be a valuable tool for the organization and mobilization of gender advocacy and interest groups (Friedman, 2005);
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3.2 Enterprise Creation through ICT

Despite the challenges, with adequate training and creation of enabling environment, ICT-based businesses can thrive in Nigeria. Some potential areas of ICT in enterprise-creation in Nigeria include the following:
Delivering IT @ School
With the development of the new curriculum for students in primary and secondary education, delivering ICT training for low level educational standard such as primary and secondary students can empower clients to become entrepreneurs. This initiative makes the individual who has been trained on this initiative to become an entrepreneur, by providing ICT education to students in primary and secondary schools, through practical training, skill acquisition and empowerment. This knowledge will prepare the students to appreciate the wonders of ICT and to broaden their horizons in the world of ICT as they advance in their various levels of education, and also to prepare them to become future entrepreneurs.

Web Development and Design
The Internet has become an influencing factor in ICT with the emergence of the world global development. The Internet thus plays a crucial role in the transformation, communication and exchange of business processes, through various interactive modes. The web has become the general and most needed base for all business initiatives to thrive, as the world is becoming a global village. It becomes imperative that all business initiatives be present on the Internet. The knowledge of web development and design empowers the client to become an entrepreneur because the development of web application through web services has become the key factor to today’s enterprise management.

Graphic Design
Branding and rebranding methodologies has been a fervent medium for businesses to sell their products and invariably impact the world market. Becoming a graphic designer can empower the client to become an entrepreneur through the acquisition of skill in designing of banners, posters, photo-editing and handbills; all of which enable businesses to promote their marketable goals. Graphical appreciation has a long way to promoting the brand name of companies. So, a graphic designer continually has job opportunities which he carries out through ICT skills acquired through training. In fact, graphic designers eventually are over-booked with jobs.

E-Empowerment Schemes
In this scheme, a client can become an entrepreneur by using ICT tools such as the mass media, on-line video streams or advertisement, to provide various empowerment schemes for traders and farmers on how to properly control, maintain and make profit in and through their various business endeavours. These e-empowerment programs, when made available on videos for sale at reasonable prices, would become a major source of income for the young/new entrepreneur.

E-Learning/Advertisement
The use of multi-media in training and retraining of youths for educational purposes and the pursuit of online programmes can also be an instrumental means of becoming a potential entrepreneur. Showcasing of cheap and new products that can help owners of small-scale businesses through advertisement and via pop-ups can also be a means of becoming an entrepreneur. These products can be purchased online or directly from the entrepreneur.

Call Centres
Not everybody owns a mobile phone in Nigeria. Since everybody needs to interact or communicate with their loved ones and potential or existing business associates, it is imperative for all to have access to means of electronic information and communication system. This calls for establishment of call centres (i.e., pay phone booths) which are a small-scale business enterprise that do not require huge capital investments, and can be afforded by almost all unemployed youth or adult who owns a mobile telephone.

Establishment of Incubation Centres
Incubation centres are more or less pupilage centres where young and up-coming ICT professionals would sharpen the skills they have already acquired, and to broaden their knowledge more on ICT and its potentials for enterprise creation. The centres would also serve for local content development promotion and research development.

Women Empowerment
Women are faced with diverse challenges in the Nigerian business world. They are faced with significant barriers in scaling up their businesses in such areas as access to affordable resources, marketing channels, training inputs, etc. These barriers can be eliminated or removed through the provision of essential business entrepreneurial tips delivered through ICT tools — e.g., use of Short Message Services (SMS), e-mail, etc.

Partnership with ICT Equipment/Service Providers
Efficiency, reliability and long life of equipment are all a function of constant maintenance of the equipment. Much ICT equipment (e.g., computers, telephones, satellite equipment, etc) have become junks in offices and homes for lack of appropriate/adequate maintenance. Partnership with manufacturers of ICT equipment/service providers with a view to training young school leavers and graduates of tertiary institutions would equip them for enterprise creation and self-sustenance.
3.3 Managerial practices

Sound managerial practices highlight the important determinants of successful ICT ventures. The key managerial best practices are as discussed below.

- A participatory and open management style is an important factor in the success of ICT projects. Peer-group support and advice, from both women and men, are valuable in overcoming challenges and achieving success.
- Investment in initial and supplemental training is key to providing high quality products and services and helping the staff cover tasks during each other’s absence. This is particularly true in cases of e-commerce businesses where the technology and business practices are new to most of the participants.
- Good public relations in the local community, with the government agencies and with customers help garner new business and facilitate business growth. This is especially significant for women-owned businesses. It helps women deal successfully with many of the prejudices they face from more traditionally minded groups who feel threatened.
- To succeed, project managers must exhibit a strong commitment to stay on course and succeed in the face of social, economic and other business obstacles.

4. CONCLUSION

The main goal of this paper is an attempt to suggest possible ICT initiatives that can be used to create self-sustainable enterprises and entrepreneurs. Achieving the initiatives is not without challenges that tend to hamper the drive to the establishment of enterprises. Among these challenges are: lack of skills by intending entrepreneurs, lack of or inadequate financial base for take-off, non-availability of sources of information regarding financial institutions that can give loans, etc. To overcome these challenges, some best practices were identified. These include acquisition of appropriate initial and on-the-business training/retraining, sourcing for information on access to needed financial and other necessary resources, identification of appropriate market and customers, government and societal support, good networks in the community and an open and participatory management style. These best practices, which will serve as useful framework for further development of ICT-based projects, will also provide valuable guidance to policy makers and prospective entrepreneurs. The best practices are easily replicable and their systematic follow-through will considerably facilitate the long-term viability and success of client-owned ICT enterprises.

REFERENCES


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