# EMPOWERING WOMEN IN RURAL AREAS THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY FOR SOCIO-ECONOMIC GROWTH

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**ABSTRACT**

Information has become the principal determinant of the progress of nations, communities and individuals. Information and Communication Technology (ICT) is a wonderful tool which benefits all spectrums of people in the world and reach millions of people every day. ICT play various roles in empowering the women such as offering entrepreneurial opportunity, breaking isolation, providing linkages to inputs and markets, assisting small and medium size business, reducing poverty, and illiteracy and improving income and savings of rural women. There is a potential for ICTs to purge gender discrimination and to empower women in society. But with science, technological innovations and socio-economic changes, women, even rural women, are progressively starting to utilize various kinds of technological instruments. Amongst the various kinds of ICTs the cell/ mobile phone, internet and computer system have reached a significant place. These technologies are providing knowledge, economic independence, social security, social networks and self-confidence to women in rural areas, mainly young girls seeking employment opportunities and working in small and medium level towns. An attempt has been made in this paper to explore women's empowerment through ICTs in rural areas. The problems affecting use of ICT devices include absence and erratic supply of electricity, lack of ICT skills, low level of awareness and so on. Government should provide basic amenities to the rural dwellers to improve their socio-economic well-being, especially in the area of ICT.

**Keywords: ICT, Women, Empowerment, Growth,**

## 1 INTRODUCTION

Information and communication technologies (ICT) comprise a complex and heterogeneous set of goods, applications and services used to produce, distribute process and transform information.(Mittal *et al.*, 2010) The ICT sector consists of segments as diverse as telecommunications, television and radio broadcasting, computer hardware and software, computer services and electronic media (e.g., the Internet, electronic mail, electronic commerce and computer games) as well as the content of these media.

Information and Communication Technology (ICT) has become a potent force in transforming social, economic, and political life globally. Without its incorporation into the information age, there is little chance for countries or regions to develop. Most women within developing countries are in the deepest part of the divide further removed from the information age than the men whose poverty they share.(ITU) ICT can be an important tool in meeting women's basic needs. A few decades ago, the post, newspapers and radio were the major communication sources in rural areas and rural people depended on these for their information needs. In the present decade, through the invention and penetration of ICTs, the situation has changed considerably. Nigeria particularly has reached a better position in ICT usage especially

in rural areas. ICTs comprise a complex and heterogeneous set of goods, applications and services used to produce, process, distribute and transform information. ICT consists of segments as diverse as telecommunications, television and radio broadcasting, computer hardware, software and services and electronic media.(Munyua, 2000) Television and mobile phones/cell phones and to some extent the internet have reached a remarkable position.

Traditional and modern ICTs can be used concurrently to speed up the circulation of information. In many African countries, ICTs are used to greater and lesser degrees in drama, dance, folklore, group discussions, meetings, exhibitions, demonstrations, visits, farmers' field schools, agricultural shows, radio, television, video, and print. Solar, satellite, and fibre-optic technologies are now in use for computers, telephones, and facsimile. (Odiaka, 2011) Telecentres have been established in villages, where appropriate, rural female farmers can tap these resources and access information using the new ICTs, such as e-mail, the World Wide Web, electronic networks, teleconferencing, and distance-learning tools. Information can empower rural females to participate in decision-making, exchange ideas with others in developed and developing countries, and improve the quality of life of the people of Africa. ICTs have changed education, training and service delivery.

## 2 INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT)

According to ITU, Information and communications technology (ICT) is an extensional term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage, and audiovisual systems, that enable users to access, store, transmit, and manipulate information.

The term *ICT* is also used to refer to the convergence of audiovisual and telephone networks with computer networks through a single cabling or link system. There are large economic incentives to merge the telephone network with the computer network system using a single unified system of cabling, signal distribution, and management. ICT is an umbrella term that consist mainly of the following; mobile phones, internet, satellite system, personal computers, radio broadcasting, television broadcasting, cloud computing, other New ICT devices.

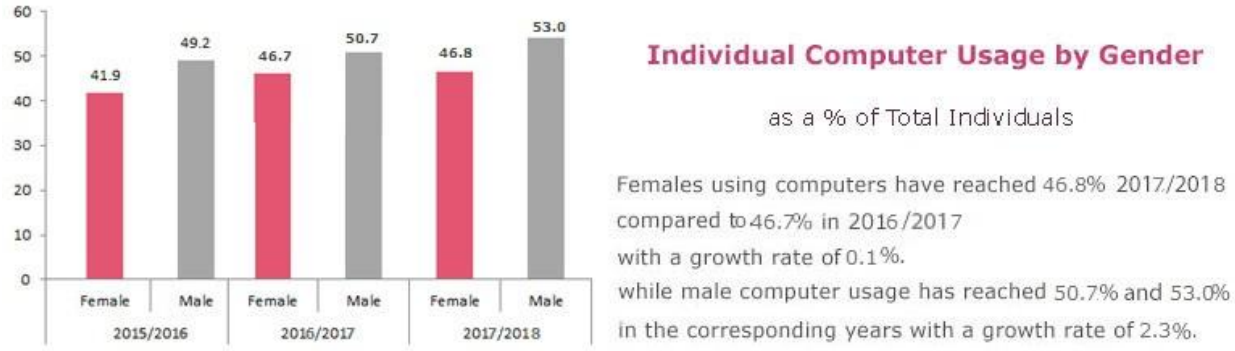


Figure 1: Individual Computer Usage by Gender

ICT is a broad subject and the concepts are evolving.[4] It covers any product that will store, retrieve, manipulate, transmit, or receive information electronically in a digital form (e.g., personal computers, digital television, email, or robots).

Objectives of ICT in this Paper include the following:

- To investigate women's empowerment through ICTs in rural areas.
- To analyze the socio and economic inclusion of rural women by ICTs.
- To identify the barriers of usage of ICTs by women.
- To examine the role of the Government and the NGOs in promoting the IT sector for women's development.
- To suggest strategies to overcome barriers and offer some practical suggestions for policy makers to improve women's access to ICT.

## 3 IMPACT OF ICT IN WOMEN EMPOWERMENT

Information and Communication Technology can play a veritable role in empowering women. ICT improves the income of rural women. ICT has the ability to break and reduce poverty, breaks systematic discrimination and violence against women and provide access to financial markets. It offers entrepreneurial opportunity for rural women, enhance decision making and ability to participate in development programmes. (Odiaka, 2011) Other roles are ability to break isolation of rural women, provides linkages for small scale enterprises , builds skill and capacity of women , assist small and medium size enterprises, transformation of the traditional roles of women , opens economic opportunity from informal to formal sector. Personal business development and growth help women overcome illiteracy. During oral discussion with the respondents, it was also said that they have been able to set up business centres and call centres where people gather to make their calls. This has improved their income and savings.

According to UNDAW (2002), ICTs provide unique opportunities for economic growth and human development. They can shape and enhance a wide range of development applications — from electronic commerce to access to financial markets; from generating employment to providing opportunities for investment to entrepreneurs, in particular small and medium-sized enterprises; from improved agricultural and manufacturing productivity to the empowerment of all sections of society; from long distance education to telemedicine, from environmental management and monitoring to prevention and management of disasters (Nagamani, 2016). The potential to help foster sustainable development, empower people – women and men, the young and old, build capacities and skills, assist small- and medium-sized enterprises, reduce poverty, and enhance participation and informed decision-making at all levels is enormous (UNDAW, 2002).

ICT offers economic opportunities (both in salaried employment and entrepreneurship, in the ICT sector itself, and in jobs enabled by ICT in all sectors) at all levels. In developing countries there are growing possibilities for outsourced service-sector jobs. Globally IT-enabled communications businesses offer possibilities of entrepreneurial opportunities for women. The technology inherently makes possible flexibility in time and place that offers great possibilities for women in view of their multiple roles (UNDAW, 2002). The sector also gives the possibility for women everywhere, despite their location, of connection to the global economy through e-commerce as producers and distributors of goods and services. For this, women need management capability, trade infrastructure, credit, and an enabling policy environment. ICT-enabled information access can break the isolation of rural women, giving them the knowledge to make decisions to improve their economic situation. ICT provides virtual space and linkages that favour small-scale enterprises, where women's entrepreneurship is more frequently found. Information is a prerequisite for empowerment (World Bank, 2002), and participation drives empowerment by encouraging people to be active in the development process, to contribute ideas, take initiative, articulate needs and problems and assert their autonomy (Diom, 1996).

ICT is the latest in the series of continuing technological revolutions and is argued to have significant influence on gender empowerment (Van-Ark *et al.,* 2002). Informed citizens according to World Bank report (2002) are better equipped to take advantage of opportunity, access services, exercise their rights, and hold state and non- state actors accountable. Social influences on women's relationship to technology affect their attitudes toward ICTs. Obayelu and Ogunlade, (2006) posited that there are great potentials of ICTs as tools for enhancing people's daily lives whether by increasing access to information relevant to their economic livelihood, better access to other information sources; healthcare, transport, distance learning or in the strengthening of kinship. The result from study conducted by Obayelu and Ogunlade (2006) showed that, the most common of the ICTs related to poverty alleviation programs in Nigeria are telephone and radio. While other commonly uses of traditional media include: Print, video, television, films, slides, pictures, drama, dance, folklore, group discussions, meetings, exhibitions and demonstrations (Munyua, 2000). The use of computers or the Internet is still restricted to very few people living in urban centres. ICTs have the potential to broaden and enhance access to information and communication resources for remote rural areas and poor communities, to strengthen the process of democratization and to ameliorate the endemic problem of poverty (Norrish, 2000).

### 3.1 KNOWLEDGE ACQUISITION

In today's developing environment usage of Information Technology has become a day-to-day activity which has exposed women to the new technologies, and hence are not difficult to be trained on them. It is observed that women in general have good concentration power owing to their nature of work, and hence are easily trained to acquire any new skills (Gurumunthy, 2004). As the women at lower strata are constrained to the homes, if we can get the technology to the women at home, we will be sure to succeed in empowering them. NGO's and Government departments must plan training programs, to provide the required skills and establish groups for the follow up action.

### 3.2 KNOWLEDGE NETWORKING SYSTEM

Women stand to benefit tremendously from the inroads laid by ICT in the domain of knowledge networking. At the very conceptual level, ICT have the potential to digitally link each and every woman in the world in a star topology network, which opens up endless possibilities for information exchange.(Mittal *et al.,* 2010) This mechanism could be used by women in creative ways, both to communicate with other people who are online, and also to disseminate information to people in the outside world who are not online through the use of convergence and hybrid technologies such as community emails, community radio broadcast, telecentres, newsletters, videos etc. This mechanism forms the skeletal process through which women communities could overcome the constraints of seclusion, mobilise resources and support, reach out to new markets and open up avenues for life-long learning.

### 3.3 WOMEN'S ACCESS TO THE INTERNET

The gender divide within the digital divide can be seen in the lower numbers of women users of ICTs compared to men. One illustration of this is the number of women Internet users. The majority of the world's women do not use the Internet (Nagamani, 2016). They are excluded from the World Wide Web. The digital divide within countries broadly reflects the gender divide. Women are in the minority of users in almost all developed and developing countries. The trend for differentiation in use starts early, in some countries boys are five times more likely than girls to use home computers and parents spend twice as much on ICT products for their sons as they do for their daughters. It is extremely difficult to get data on use by gender by country for developing countries.

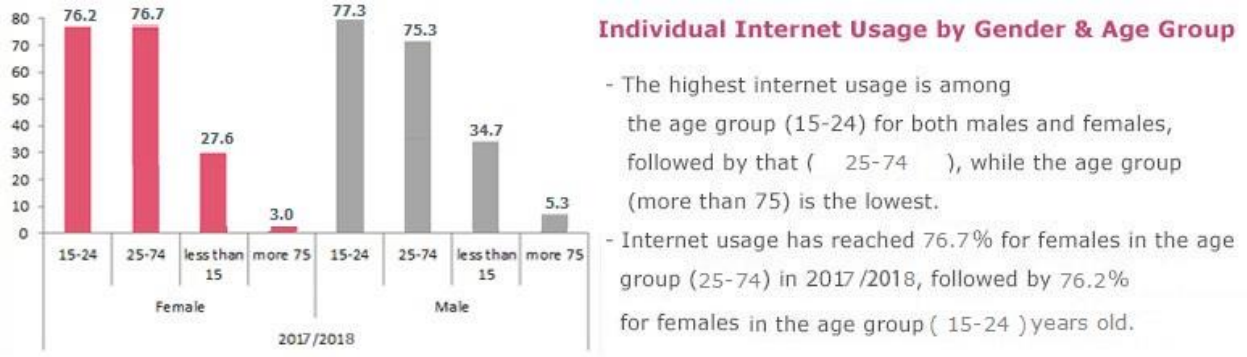


Figure 2: Individual Internet Usage by Gender and Age

### 3.4 CAPACITY BUILDING OF WOMEN

Several organizations are building the capacities of girls and women to make ICTs accessible and useful to them. At one level, girls and women are being provided general training in ICTs for ICT-related jobs; at another, women in business, women entrepreneurs and women in the professions, are systematically being supported for skill enhancement, career growth and greater work efficiency (Okon, 2013). In most part of Nigeria, socially disadvantaged women have used radio and video to document and disseminate traditional farming practices, to reach policymakers, and to archive their community-based development work. Such development activities in fact have deeper meanings; they reflect the recording by women of their own history and reclamation of their knowledge.

## 4 APPLICATION OF ICT IN RURAL AREAS FOR SOCIO-ECONOMIC GROWTH

One significant ICT modern communication tool is the internet. With help from international organizations like the World Bank, and UNDP's Millennium Development Goals, national and international development agencies and corporate bodies, rural development initiatives are introducing the internet into rural areas through the implementation of telecentres. These centres are also known as village Information centres, information centres, information kiosks. They provide internet and computer-based information and training to rural people. They are run by rural women who are associated with village Self-help Groups (SHGs). (World bank, 2005). These information centres help to empower rural women's entrepreneurship and provide computer training to young girls who can then look for clerical jobs near their villages. However, the centres are not used much by women for their information needs. Rural women in

developing countries may be able to sell their products directly without going through intermediaries. One of the most powerful applications of ICT is Electronic commerce. E-commerce refers not just to selling of products and services online but also to the promotion of a new class of ICT-savvy women entrepreneurs in both rural and urban areas. E-commerce initiatives can link producers and traders directly to markets at national, regional and even global levels, allowing them to restructure their economic activities and bypass intermediaries and the male-dominated and exploitative market structure.

### 4.1 LIVELIHOODS

New ICTs provide opportunities to reorganize economic activities in ways that can bypass the traditional dependence of women producers on male-dominated and exploitative market structures, including "middle-men"(Munyua, 2000). In many places, initiatives are being tried that link women artisans directly to global markets through the Internet, as well as support their activities with market and production information. The CBOs are provided with cellular phones, and women have been trained to maximize the use of telephones for selling not only in their immediate neighborhoods but also reaching new markets within the city.

### 4.2 ACCESS TO INFORMATION

ICT can deliver potentially useful information, such as market prices for women in small and micro-enterprises. For example, use of cellular telephones illustrates how technology can be used to benefit women's lives, by saving travelling time between the market and suppliers, by allowing women to call for product prices and by facilitating the constant juggling of paid and unpaid family activities. (Obayelu, 2006). Now a day's many useful mobile apps are developed so as to provide different sets of information without going to the concerned places or authorities. So, this type of applications can help the rural women in many ways according to their livelihood.

### 4.3 EMPLOYMENT

Considering, then, how important the IT industry may be for the employment of young female professionals and if it is not now, it will be soon, the responsibility to create nondiscriminatory and comfortable workplace environments should fall heavily on the largest and most economically significant companies in the software sector. (UNDAW,2002). However, ICT has played an important role in changing the concept of work and workplace.

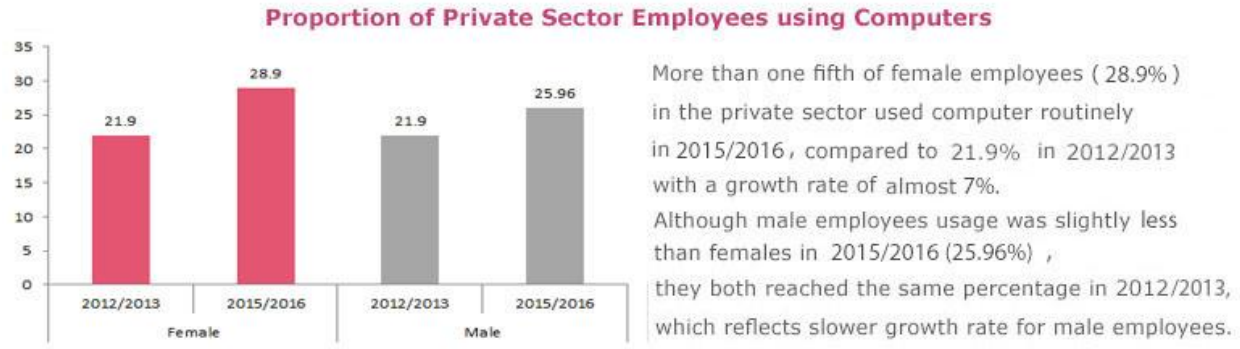


Figure 3: Proportion of Private Sector Employees using Computers

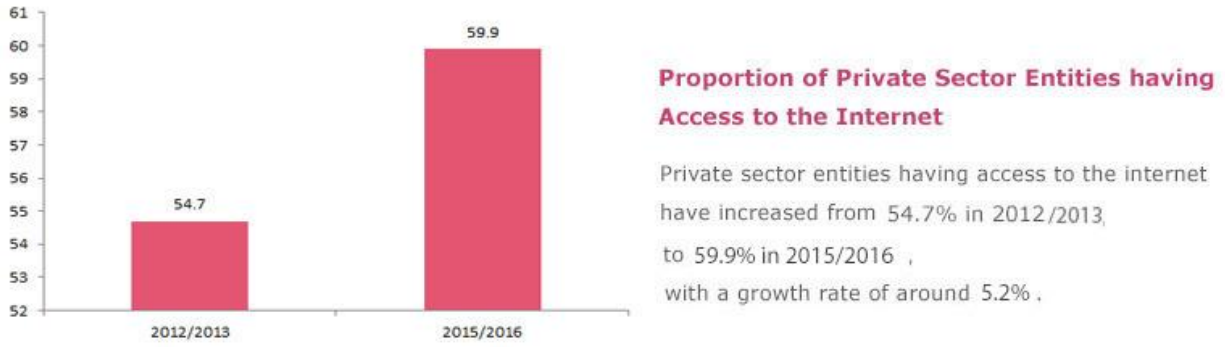


Figure 4: Proportion of Private Sector Entities having Access to the Internet

## 5.0 BARRIERS TO USAGE OF ICT'S FOR WOMEN IN RURAL AREAS

• Lack of clear National Policy for promoting ICT for women's development.

• Poor ICT infrastructure, inefficient telephone services, lack of electricity in many remote, far-flung areas, and frequent power cuts.

• Lack of computer skills on various areas including hardware and software installation and maintenance, internet and non-internet-based skills such as telnet, FTP, mailing etc.

• Limited online information in languages other than English.

• Women's time is at a premium. The barrier to ICT use includes the issues of information overload and the time consumed in searching for useful and practical information.

• Social and cultural barriers.

## 6.0 SUGGESTIONS TO IMPROVE THE USAGE OF ICT TO AVOID THE BARRIERS

- Equitable access to ICT technology and the autonomy to receive and produce the information relevant to their concerns and perspectives are critical issues for women.
- There is need to use a rights-based approach to ICT policy development, where everyone has the right to affordable access to ICTs.
- The question of where and how they can gain access to ICT becomes important. This is an area where intermediary organizations can help bridge the gap by email accounts, bulletin boards, search engines, mailing lists, and other useful functions serve as communication, networking and collaboration channels among women's groups, and between women and the external sphere.
- Promote the enrollment of girls in ICT programs by providing incentives such as scholarships and awareness raising activities.
- Government and NGOs need to impart technical education on the use of ICT as a part of both formal and informal education system and to initiate distance learning and vocational courses.
- Language access must be addressed as a serious barrier to gender equity on the international ICT policy level.

## 7.0 CONCLUSION

Rural woman's needs are very specific; they need more local information rather than global information. Nevertheless, if the information centers disseminate information on agriculture, domestic developments, local marketing news, government schemes and health care in local languages, this will be very useful for rural people. The study therefore suggests that technological development is an urgent requirement for the socio and economic empowerment of rural women.

Majority of women in the developing world do not have access to ICTs due to variety of barriers such as the infrastructural, social, cultural and linguistic. While it may be necessary for the progressive elite to mediate information dissemination, real democratization of information depends on making ICTs relevant to the majority and accessible to every woman. Today, print media and radio are used extensively by feminist groups for information dissemination. ICTs can strengthen these media strategies. Community access points such as telecentres can be a simple tool for conveying information to women that supports their social and political empowerment. Addressing the ICT arena is part of a larger struggle to build an information society based on protecting people's right to communicate, own and use knowledge for their own ends, and resisting curtailments on freedom to use, share and modify information tools and content. ICT have the potential to reach those women who hitherto have been not reached by any other media, thereby empowering them to participate in economic progress and make informed decision on issues that affect them.

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