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Eradicating Poverty in Sub Sahara Africa Using ICT

1Amosa Babalola, 2Oladipupo Bolaji, 2Fabiya Odunayo, 2Adigun Olajide & 3Osazuwa Kingsley

1Allbytes Consults Gbagada, Lagos, Nigeria

2Federal Polytechnic Ede, Nigeria

3CCBST Toronto, Canada

allbytesconsultz@gmail.com

Phone: +234 8034719314

ABSTRACT

This report aims to give an overview of how Information and Communication Technology (ICT) could be used to eradicate poverty in the Sub-Sahara Africa region and stimulate economic growth. Advantages of ICT were considered and solutions to poverty in the region proffered. If implemented accordingly, poverty will soon become an issue of the past in the region.

Keywords: Poverty, ICT, Sub-Sahara, eradicate, economies

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1. INTRODUCTION

ICT stands for “Information and communication technology”. It refers to technologies that provide access to information through telecommunication. It is similar to Information Technology (IT) but focuses primarily on communication technologies. This includes the internet, wireless networks, cell phones and other communication mediums [1]. According to UNESCO “ICT is a scientific, technological and engineering discipline and management technique used in handling information, its application and association with social, economic and cultural matters”. ICT is defined as “a set of tools enabling, supporting, and reinforcing educational reform” [2]. Information Communication Technology (ICT) is defined as “skills around computing and communications devices, software that operates them, applications that run on them, and systems that are built with them” [3].

ICT affects people and countries, and unfortunately leaves many behind the technological progress. ICT establishment and maintenance require extensive fiscal commitment [4]. ICT includes skills, software, applications, and systems. ICT education consists of four components: ICT/Digital Literacy; ICT Infrastructure and Support Applied Technologists; Specialized Business and Industry uses of ICT; and ICT Research and Development Scientists (Mid-Pacific ICT Center, 2014). ICT/Digital Literacy, ICT Infrastructure and Support Applied Technologists are important basic and advanced futures of ICT that should be integrated in teaching and learning to insure ICT sufficient spread through generations [3].



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Today, the place of ICTs in education and the world in general cannot be undermined. Modern day businesses are conducted and facilitated through the use of telephones, fax machines and computer communication networks through the internet. This phenomenon has given birth to the contemporary e-commerce, e-government, e-medicine, e-banking and e-education among others. [5], [6], [7]. While the common use of ICTs tends to refer to the newer technologies of phone and internet, the term ICT is best used to also include the more traditional communication media such as radio and television. Digital convergence is gradually bringing devices to the markets that include the traditional media (phones with radio, media centres with computing capability and television) which will increasingly blur the distinction between old and new ICTs. ICT stands for “Information and communication technology”. It refers to technologies that provide access to information through telecommunication. It is similar to Information Technology (IT) but focuses primarily on communication technologies. This includes the internet, wireless networks, cell phones and other communication mediums [8].

Poverty

Poverty is the lack of basic human needs, such as clean and fresh water, nutrition, health care, education, clothing and shelter, because of the inability to afford them. This is also referred to as absolute poverty or destitution. Relative poverty is the condition of having fewer resources or less income than others within a society or country, or compared to worldwide averages. About 1.7 billion people live in absolute poverty. Poverty is additionally seen as a state of mind and a lifestyle- more than just a lack of materials. It is a state of deprivation and insecurity. Even those who can get above poverty are always close to falling back into its clutches. Accumulation of wealth, sometimes resulting in overall poverty reduction within a nation or society, has historically been a result of economic growth as increased levels of production, such as modern industrial technology, made more wealth available for some individuals and groups within societies and nation states. Wealth distribution however, often occurs along highly unequal lines.

Poverty in Africa is caused by corruption and poor governance, poor land utilisation and land tenure system, civil wars and unending political conflicts, poor infrastructure, diseases and poor health facilities, the World Bank and IMF policies, among others. According to [9], and [10], poverty has various manifestations which include the lack of income and productive resources sufficient to ensure sustainable livelihood, hunger, and malnutrition, ill health, limited or lack of access to education and other basic services, increased morbidity and mortality from illness, homelessness, inadequate, unsafe and degraded environment, social discrimination and exclusion. It is also characterised by lack of participation in decision making in civil, social and cultural life [11]. There are many definitions of poverty depending on the context of the situation and the views of the person giving the definition. These are some from various sources including a well-known development scholar. Poverty is also often divided into relative poverty and absolute poverty. Poverty can also be defined as a condition wherein a person cannot satisfy his or her basic needs, namely, food, shelter, clothing, health and education. Causes of poverty in Sub-Saharan Africa are extensively presented in [12], [13]. Various causes of poverty highlighted include: (a) The lack of capacity of the poor to influence social processes, public policy choices and resource allocations. (b) Low capacities through lack of education, vocational skills, entrepreneurial abilities, poor health and poor quality of life. (c) The disadvantaged position of women in society. (d) Exposure to risks through lack of financial, social or physical security. (e) Low levels of consumption through lack of access to capital, social assets, land and market opportunities. (f) Exposure to shocks due to limited use of technology to stem effects of drought,



floods, army worms, crop pests, crop diseases, and environmental degradation. (g) Inadequate environmental protection measures. (h) Lack of macro-economic stability that erodes the resources of the poor through inflation and other variables. (i) The inability of the national economy to optimise benefits within the global system. (j) Habits and conventions based upon superstition and myths giving rise to anti-social behaviour. (k) Other factors leading to vulnerability and exclusion.

Table 1 Regional and Global Poverty Estimates In 2018, April 2022 Update Revisions

Region	Survey Coverage (%)	\$1.90				\$3.20				\$5.50			
		Headcount ratio (%)		Number of poor (mil)		Headcount ratio (%)		Number of poor (mil)		Headcount ratio (%)		Number of poor (mil)	
		Jun 21	Apr 22	Jun 21	Apr 22	Jun 21	Apr 22	Jun 21	Apr 22	Jun 21	Apr 22	Jun 21	Apr 22
East Asia and Pacific	97.5	1.2	1.2	25	25	7.1	7.4	148	154	24.7	26.4	514	552
Europe and Central Asia	89.4	1.1	1.0	5	5	4.2	4.0	20	20	11.9	11.7	58	58
Latin America & Caribbean	86.7	3.7	4.0	23	25	9.2	9.9	58	63	22.5	23.7	143	151
Middle East and North Africa	50.9	7.0	7.1	27	27	19.9	19.7	77	76	44.4	44.0	172	170
Rest of the World	82.4	0.6	0.6	7	7	0.8	0.8	9	9	1.3	1.3	14	14
South Asia	21.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sub-Saharan Africa	72.6	40.4	38.9	436	420	66.7	65.4	719	705	86.1	85.3	928	920
East & Southern Africa	60.4	43.7	44.0	281	279	68.2	68.8	439	442	86.4	86.7	556	558
Western & Central Africa	90.6	35.5	31.4	155	137	64.3	60.4	280	263	85.5	83.1	372	362
World Total	69.9	n/a	8.6	n/a	656	n/a	23.2	n/a	1760	n/a	42.9	n/a	3259

Source – PIP (Poverty and Inequality Platform)
April 2022 global poverty update from the World Bank

Poverty can be structural (chronic) or transient. The former is defined as persistent or permanent socio-economic deprivations and is linked to a host of factors such as limited productive resources, lack of skills for gainful employment, endemic socio-political and cultural factors and gender. The latter, on the other hand, is defined as transitory/temporary and is linked to natural and man-made disasters. Transient poverty is more reversible but can become structural if it persists. Table 1 shows the Regional and Global poverty estimates for 2018. It underscores the concerns for Sub-Saharan Africa region where the prevalence of poverty is more serious. The new international poverty line is set at \$2.15 using 2017 prices. This means that anyone living on less than \$2.15 a day is considered to be living in extreme poverty. About 648 million people globally were in this situation in 2019. The figure shows that majority of people in Sub-Sahara Africa lives in extreme poverty [14], hence a way out by usage of ICT is proposed.



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2. ICT (INFORMATION AND COMMUNICATION TECHNOLOGY)

Information and communications technology is usually called ICT, is often used as an extended synonym for information technology (IT) but is usually a more general term that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), intelligent building management systems and audio-visual systems in modern information technology.

ICT consists of all technical means used to handle information and aid communication, including computer and network hardware, communication middleware as well as necessary software. In other words, ICT consists of IT as well as telephony, broadcast media, all types of audios and video processing and transmission and network-based control and monitoring functions. The expression was first used in 1997 in a report by Dennis Stevenson to the UK government and promoted by the new National Curriculum documents for the UK in 2000. ICT is often used in the context of "ICT roadmap" to indicate the path that an organization will take with their ICT needs. [15].

The term ICT is now also used to refer to the merging (convergence) of audio-visual and telephone networks with computer networks through a single cabling or link system. There are large economic incentives (huge cost savings due to elimination of the telephone network) to merge the audio-visual, building management and telephone network with the computer network system using a single unified system of cabling, signal distribution and management.

Since the 1990s, there have been several initiatives globally, to apply information and communication technology (ICT) to address issues of poverty in developing countries. ICT is defined as consisting of computers, Internet, radios, TV, telephone among many others, Plus the procedures, and processes that support the processing, storage and dissemination of the Information. Information is vital for economic development. Radios, TV and telephone have traditionally been utilized as communication tools to address various issues in developing countries.

Since the 1970s, new technologies of the Internet and wireless mobile phones have emerged as excellent communication tools with several advantages that include: reduced costs, national and global coverage, permanent availability and interactivity. Many of the benefits from the modern ICTs are to be found in the urban areas, because of well-developed infrastructure, high levels of education and skills. In other words, there is a digital divide between the urban and rural population.



a. Importance of ICT in Sub-Sahara Africa

Importance of ICT Globally and Nationally is presented in [16]. The increasing use of technology in all aspects of society makes confident, creative and productive use of ICT an essential skill for life. ICT capability encompasses not only the mastery of technical skills and techniques, but also the understanding to apply these skills purposefully, safely and responsibly in learning, everyday life and employment. ICT capability is fundamental to participation and engagement in modern society. ICT can be used to find, develop, analyze and present information, as well as to model situations and solve problems. ICT enables rapid access to ideas and experiences from a wide range of people, communities and cultures, and allows pupils to collaborate and exchange information on a wide scale.

ICT acts as a powerful force for change in society, and citizens should have an understanding of the social, ethical, legal and economic implications of its use, including how to use ICT safely and responsibly.

- i. ICT can be used to find, develop, analyze and present information.
- ii. It can be used to model situations and solve technical problems.
- iii. It enables rapid access to ideas and experiences from a wide range of people, communities, and cultures.
- iv. It allows people to people to collaborate and exchange information on a wide scale.
- v. It helps for research
- vi. It helps in solving business problems.

b. Advantages of ICT in Sub-Sahara Africa

Information communication technology (ICT) has greatly impacted and enhanced global socialization and interactions. In fact, information technology has taken over nearly every aspect of our daily lives from commerce (buying and selling) to leisure and even culture. Today, mobile phones, desktop computers, hand held devices, emails and the use of Internet has become a central part of our culture and society. These technologies play a vital role in our day-to-day operations. ICT has made global social and cultural interaction very easy. We now live in an interdependent global society, where people can interact and communicate swiftly and efficiently. News and information can now be transmitted in minutes. Individuals can easily stay in contact with members of their families who reside in other countries or make new friends across the world.

Examples of information and communication technology (ICT) tools used for these purposes are emails, instant messaging (IM), Chat rooms and social networking websites, such as Facebook and Twitter, Skype, iPhones, cellular phones and similar applications. The precise contribution and the impact of that contribution will vary considerably depending on the specific local circumstances. In recent years, considerable attention has been paid to the role that information and communication technologies (ICT) might play in promoting economic growth, combating poverty, and strengthening developing countries' participation and competitiveness in the global economy.



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Spurred by the example of countries such as India that seem to be “riding the ICT wave” successfully, many developing countries especially the sub-Sahara Africa region can look to reap the benefits of ICT-led growth for their own economies. ICT made a major contribution towards the elimination of language barriers - people speaking different languages can connect and socialize or trade in real time via the Internet. This is made possible with the use of language translators. In as much as the advantages of IT are numerous, it is important to mention some of its major disadvantages to the society.

3. USING ICT TO ERADICATE POVERTY IN SUB SAHARA AFRICA

Poverty amid plenty is the greatest challenge facing Nigeria and a recent scale has shown that unemployment, income inequality, polygamy, business failure, sickness and environmental degradation are among the main causes of poverty in Nigeria and sustainable poverty eradication is unlikely to be achieved without the proper use of ICT. ICT plays a major role in all aspects of national life: in politics, in economic life, as well as in social and cultural development.

It is rapidly transforming our lives, the way we do business, access information and services communicate with each other and entertain ourselves. As a matter of fact, it fuels the global economy. ICT has played major roles in alleviating poverty in different many ways, especially in the lives of youths whose hopes were almost shattered upon finishing schools and not finding jobs. ICTs have repeatedly demonstrated its potential for eradicating poverty in developing countries.

In many instances, poor people have experienced benefits in the form of; increased income; better health care; improved education and training; access to job opportunities; engagement with government services; contacts with family and friends; enterprise development opportunities; increased agricultural productivity, and so on. ICT plays a major role in all aspects of national life: in politics, in economic life, as well as in social and cultural development.

It is rapidly transforming our lives, the way we do business, access information and services, communicate with each other and entertain ourselves. It fuels the global economy. Communication is key to progress and development, prompt and easy access to information. Government can use Information and communication technology to contribute to the eradication of poverty in these several ways:

- i. Establishment of ICT vocational Centres: By establishing or making ICT vocational centres, it will help reduce poverty in the sense that people would go for GSM training, hardware training etc. and after this training the government will give them an interest free loan to start up their own business and after a short period of time, they will pay back the money to the government without any interest, by doing this government is using ICT to reduce or eradicate poverty.
- ii. Establishment of ICT Certification Centres: By establishing ICT certification centres the government will help reduce poverty in the sense that after organizing workshops, seminar, training the individuals which participated in the seminar or workshop will be issued a certificate and this will help them gain employment in different establishment because of the training and little experience they have and by doing this the government is using ICT to eradicate poverty.



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- iii. Information Access and Dissemination: Through the use of ICT the masses have ready, on-hand access to information and knowledge, SMS, MMS, Emails, the internet and mobile telephone has greatly increased the way communication is done today. Cable and satellite television, radio stations have equally tapped into this trend to make dissemination of news and information livelier and are thus also able to reach more people at far cheaper costs on either end of the spectrum. In addition, the development and access to social networks through low-cost ICT, telecentres will enhance timely access to accurate and reliable information by the poor. Through the help of ICT, a lot of transactions (Money transfers from far and wide), which earlier proved to be a bottle neck in the (case of emergencies where money is needed to cut across poverty) has suddenly become a thing of the past and in any part of Nigeria one finds him/her self, money transfers is now done without pain.
- iv. Economic Intervention: ICT, as a sector, can create some employment opportunities directly to the poor both in the manufacturing of hardware and software. Because of the low educational levels and skills of the poor, we can expect that there are more employment opportunities in the service sector. In the interest of direct poverty reduction, it plays a major role in enhancing the activities of the poor and increasing their productivity: by increasing their access to market information or lowering the transaction costs of poor farmers and traders.
- v. ICT has proven to increase efficiency and effectiveness, competitiveness and market access for developing country firms. Where bureaucratic jobs that were done manually causing too much delay and setbacks, work is now been done digitally. With the establishment of an e-commerce programme, local artisans in rural villages have now been able to bypass middlemen and market their product directly to first world customers. Its success is based on the business development applications that were grounded in local language and relevant content. The government should bring or introduce ICT in to the economy so by doing this they are using ICT to eradicate poverty.
- vi. Knowledge and Skill Enhancement: If proper information and communication is brought to the door step of a common man, “as the saying goes, knowledge is power” it would go a long way to improve wellbeing and living condition. Learning and skill and acquisition has become more interesting, enjoyable and much more effective. Multimedia applications in education has improved the learning capabilities of school children as well as enable hitherto neglected sectors of the masses to gain access to various skill/wealth acquisition programme and schemes.
- vii. With new technologies sprouting up on a daily basis with the sole aim of enabling communications and bridging the existing divide between the developed and developing world, the global race to ensure that all corners of the world have access to life changing technologies that have the capacity to eradicate poverty, enabling the achievement that will bring about benefits that will make life meaningful for all.



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- viii. In the developed world, technology is the backbone of the economy. Almost everything done by developed economies is enabled by technology and in other to be relevant Nigeria economy must also embrace technology to better their lots and compete in the global race. For instance, hardly will you come across a school abroad that does not have technology as its bedrock.
- ix. **Bolstered Economy:** The overall implementation of ICT also largely contributes to high increased GDP for the nation. With a more mobile, highly-skilled and well-informed workforce. ICT, if supported with the right policies and with cross-cutting and holistic approaches, will complement and strengthen other multi sectoral efforts that are required for poverty reduction, including those meeting basic needs.
- x. **Job Creation:** ICT implementation automatically leads to job creation/employment opportunities, for instance, with the advent of the GSM technology, many hitherto unemployed citizens quickly became self-employed entrepreneurs and dealers and the industry has continued to flourish and booming till date. The application of computer technology in day-to-day business and economic activities has invariably led to demand for skilled labor in the industry and departments and units nearly every organization and business interest across the nation. The higher the value of ICT indicators the lower the poverty rate in every economy.
- xi. **Improved Health care:** A healthy nation is a wealthy nation. With the mass exploitation of ICT, the now better-informed masses are healthier as they are readily exposed to health care routines, counsel and popular ethics.
- xii. **Entertainment:** Before the existence of the television, man had no other means of distraction causing procreation and excess population, but as soon as television was invented, this helped to curb that issue. ICT aids entertainment and positive ideas have sprung up especially among the youths. Using ICTs to support poverty reduction is found to be possible, practical and affordable if Nigerian government acknowledges its role as a major employer and user of ICT beginning with a development commitment that targets poverty eradication.



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4. CONCLUSION

In this paper the use of ICT to eradicate poverty in Sub-Sahara Africa has been presented. Technology does not solve social and economic problems, but its implementation hence, the strategies that has been highlighted are to be used if actually ICT will be the machinery of poverty eradication in Sub-Sahara Africa. Use of information and communication technologies are a pre-requisite for economic and social development in our world. They are the functional equivalent of electricity in the industrial era.

5. RECOMMENDATIONS

- a) More data are required on the impact and effectiveness of using ICTs to support to pro-poor growth (PPG) and the delivery of pro-poor services.
- b) The efficiencies and increased effectiveness in mainstream development co-operation that ICTs can provide has to be demonstrated, particularly where they are competing for scarce resources.
- c) Co-operation with the private sector is particularly pertinent for increasing ICT access,
- d) although synergies with other sectors should also be sought.

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