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**INFORMATION TECHNOLOGY - A VERITABLE TOOL FOR
NATIONAL DEVELOPMENT**

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Information Technology - A Veritable Tool For National Development

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Abstract

Purpose: Information Technology has become an indispensable tool in the achievement of remarkable feats - advances in health, agriculture, education, effective and efficient business solutions in the western world; whereas, in the African domain, only meager efforts has been made to exploit and leverage the merits of IT. The focus of this paper is to elucidate the concept of IT, its evolution, and challenges in the African setting; and ultimately a roadmap is proffered on how to leverage IT for National development.

Methodology: To produce tangible inferences tailored at the solutions to the challenges mitigating the optimal utility of IT in the African setting, relevant data focused on IT, its evolution, challenges, advances, current state, and usage were gathered from literature most relevant to the subject matter via eBooks, articles, and first-hand observation. The modeled concept here constitutes a discuss on the meaning and applications of IT; the evolution of IT; a survey of national development constraints of African countries, threats and impediments to IT utility in the African domain; and ultimately a roadmap for IT in improving National development with better policies in Africa.

Results: Based on the problem domain, the findings of this study imply that the drawbacks to the optimal utility of IT in the African setting are primarily socially induced, economic-related, driven by lagging policies, and less of technicalities or gadgetry. The proffered solutions focus on the adjustment of regulations, policies, and individual efforts that promote healthy IT practices to facilitate National development.

Unique contribution to theory, policy and practice: This study brings to light the major drawbacks mitigating the leveraging of IT in National development in the African setting; it further demonstrates that a blend of an adjustment of policies and regulations, and healthy IT practices/habits by individual as novel approach play a key role in curbing the challenges in question and ultimately yield a significant improvement in the utility of IT in fostering National Development in the African setting.

Keywords: *Africa, Education, Development, Impediments, Policy, Information Technology.*

1.0 INTRODUCTION

We currently live in a world where Information Technology orchestrates core functions that drive our lives ranging from health, transportation, agriculture, communications, and the economy. According to Josephine (2012), the world has witnessed increased interdependence in the last two decades, thanks to globalization; the main driving forces of this process are technology, policy, and competition and it subordinates domestic economies to global market conditions and practices. Over the years, Nigeria has witnessed a dramatic revolution in its methodologies; the techniques adopted by industries, firms, and institutions for executing projects and managing their affairs and culture-at-large. For instance, it has become an unstated norm that every credible organization/institution ought to have a registered website that makes it accessible to the world, automates tasks such as publicity, communication, recruitment; and also promote its trademark. In most cases, the products of Information Technology like software have come to serve as highly reliable tools in accomplishing sophisticated technical tasks – e.g., the Finnacle software used by most banks in Nigeria to perform their transactions and effectively give assessments and accurate documentation.

Gadgets, which encompass a blend of hardware and software have tremendously become indispensable in a ubiquitous sense in both the work environment and on a personal level, as trending firms primarily rely on computerized devices and networks(servers, PCs, smartphones, routers, mainframes, microphone, etc.) to run their affairs This implies that Information Technology (IT) has drastically affected the evolution of nations in the past decades and has now become a veritable tool being used to solve national challenges. Dario (2011) states that IT is an application of scientific knowledge for practical purposes that use computer systems to gather, process, store, protect, and transfer information. Generally, it is referred to as Information and Communications Technology (ICT).

In recent years, IT has penetrated many sectors in Africa but its development and infrastructure are still far behind compared to developed nations due to poorly managed policies and regulations, poor infrastructure and capital investment, low literacy rates, high cost of bandwidth, and social issues (Martin, 2008). According to Manfred (1990), Technology will help humankind to do things that it has been doing but adversely do them better, cheaper, and faster. Thus, providing new capabilities; as it affects the way human does things to change lives. According to ITU (2015), National Development is a means by which public welfare can be improved by eliminating illiteracy, ignorance, poverty, and improving amenities like education, transportation, and health care. Concerning the above definition of National Development, it can be deduced that Information Technology which currently serves as a major determinant in the success of any mega endeavor today, and as a core part of the Nigerian culture is of great significance in fostering the achievability of National Development. This would include promoting efficiency in diverse sectors of an Economy by automating their drudgery tasks which in turn relieves workers to perform more creative works and research/develop solutions to globally perturbing problems. Information Technology has also enormously enhanced the use of electronic surveillance techniques over crude surveillance; can

be applied to the prediction and solving of crimes which in turn would promote tranquillity thereby enabling a conducive atmosphere for development.

1.1 Evolution of Information Technology in Africa

Ponelis & Holmner (2015), stated that the evolution of Information Technology in Africa can be traced back to the 1990s and the early 2000s where efforts were predominantly concentrated on bridging the digital divide through overcoming connectivity and access barriers for more and more of Africa's population which ultimately help to overcome a large extent of the so-called 'last mile' challenge faced. The penetration increased specifically in the late 2000s and early 2010s where focus started to shift to transform societies and economies since enhancing information flows alone is not sufficient to grasp development opportunities. Of recent, it was vital for Africa to foster digital opportunities and social inclusion by enhancing the use of ITs for capacity building, empowerment, governance, and social participation to strengthen capacities for information sharing and cultural creations, performances, and exchanges of knowledge for national development. Hence, Approximately 250 million people are expected to join the African workforce between 2010 and 2050 with the aid of Information Technology (The Economist, 2014).

According to Sefiu (2013), the history of Information Technology can be traced back to the development of electromechanical calculators during the Second World War around the 1970s and after decades it is now a vehicle with great potential to improve the developmental process of any developing nation like Nigeria and a driver for economic development for other African countries, thus, some African countries have already started capitalizing on IT like South Africa and Egypt. This implies that not until recently has Africa significantly adopted Information Technology not to mention exploiting its merits.

2.0 Threats to Information Technology in West Africa.

Threats to Information technology are malicious occurrences and acts that aim to corrupt, purloin data or disrupt an infotech system for data theft, sabotage, and other nefarious reasons. Information Technology in the African axis over the years has been hunted by numerous threats which mitigate its efficacy as a vital tool in enhancing the advancement of African nations, and some of such threatening activities encompass the following:

2.1.1 Cybercrime: According to Navneet (2018), A generalized definition of cybercrime may be Unlawful acts wherein the computer is both a tool and target; Cyber Criminal is a person who commits an illegal act with a guilty intention or commits a crime in context to cybercrime. It is an onsite or offsite base offense that affects extensively the infotech system over two decades. One of the ways by which Information Technology is abused is through cyber-crimes consisting of Identity theft and phishing - these acts have greatly tarnished the perception of Information Technology. Cybercrime highlight the centrality of networked computer in the society as well as the fragility of such seemingly solid factors as individual identity. Cybercrime has affected directly the entire agents of an economy (firm, individual, and government) in attaining national growth and development. For instance, in a corporate firm scenario where criminals illegally obtain an individual's bank or credit card details to gain

access to funds, make purchases online, or execute phishing scams has a heavy negative implication on the advancement of an entity.

2.1.2 Privacy Intrusion: This is one area where the merits of Information Technology are highly abused. This entails the use of Information Technology gadgets and software to execute illegitimate surveillance on third parties and further use this information for cyber-attacks.

2.1.3 Child safety: The limitless access to information on the web provided by Information Technology with virtually no age barrier has greatly breached the safety of children i.e. Persons with malicious intentions get to interact with these children without their parent's consent, and hence in the process often lure or trick them into doing their bidding like disclosing sensitive information about the parents, rape, gang activity and abetting crimes.

2.1.4 Decline in physical social activities/interactions: The versatile application of Information Technology in our culture today has greatly come at the price of great dependence and in the extreme – addiction to IT services. To this end, many persons have drastically disengaged from the traditional ways of social interactions which entail physical person-to-person contact and interaction, instead, a large number of people opt for the virtual interaction forms which include chatting, video calls, and all types of internet correspondences.

2.2 Impediments to National Development in West Africa

The primary impediments constraints to the national development of West African states particularly Nigeria constitutes the following:

2.2.1 Corruption: According to Tanzi (2002), corruption is the abuse of public power for private benefits which has eaten deep into the fabric of many nations. Corruptions are of notable types (economic and financial) that have over the years denied Nigerians the right for welfare utilization and resource allocation that serves as an engine for economic development; its causes are poverty, poor morality, dysfunctional culture, and greed. This has affected Nigeria as a nation through; insecurity, underdevelopment, poor infrastructural development, high poverty level, and tannish of public image. Nigeria as a nation and Africa can be better and set on the right footing if the corruption is tackled at the grassroots - an adjustment by individuals to a mentality that upholds morality backed by favorable and just economic and political policies/practices.

2.2.2 Nepotism and tribalism: Nepotism is giving credits/rewards to people primarily by showing favoritism based on relationship rather than on an objective evaluation of the ability or suitability of a candidate; for instance awarding a contract to a relative even though other contractors are better qualified, more competent, willing and able to perform the task efficiently and effectively. Tribalism is a behavior, attitude that is based on being loyal to a tribe or other social group. Eugene et al (2010) state that Nepotism and tribalism are the greatest mild light of Africanism. Even though there is no clear distinctive race in Africa, in particular Ghana, it may be found that individuals make a conscious effort to segregate and stereotype themselves where others from different tribal backgrounds are alienated and ostracized. The impediment facing Nigeria has always been Tribalism and Nepotism which has eaten deep into the sense of cultural co-existence and the causes are poor leadership, selfishness, unequal distribution of national resources. Nepotism and tribalism can be corrected if an economy learns to tolerate

the differences in individuals and groups to ensure peaceful co-existence, embrace the free, fair, and credible selection of employees into governments and also encourage inter-tribal marriage.

2.2.3 Poverty: The absolute approach to poverty entails that poverty exists independently and does not depend on the general standards of living of the community in which it is created while the relative approach entails a standard of living in relation to the position of other people in the expenditure/ income distribution and argue poverty base on a phenomenon of inequality (Deguara, 2008). Poverty is one of the widespread and persistent social problems of most economies especially in the developing nations whose origin can be traced back to the 12th century when the word was used primarily for small means or moderate circumstances which are structural problem causing homelessness, unemployment, and oppression (Deguara, 2008). Poverty is caused as a result of uneven distribution of resources and opportunities, stereotype, physical disability, gender discrimination, absence of social services, lack of health facilities and basic social amenities, and unemployment among others, and this has affected many African nations through poor infrastructural development, poor educational system, social tension, that culminates in abetting the division of a nation. Whereas a lot will be done to ameliorate the situation if the government provides and promotes even opportunities and facilitate empowerment.

2.2.4 Gender Inequality: Gender inequality entails the inequity in the distribution of opportunities (educational, economic, political, social power) to individuals based on their sex-favoring a particular gender over the other. It fosters hindrances that prevent humans from contributing to social activities that might ensure national development which largely limits women based on religion, cultural, and social factors forgetting their impacts.

According to Dollar & Gatti (1999), Gender inequality decreases the average of Human Capital, because talented females would be superseded by unqualified males which can lead to an inefficient economy. Gender inequality has affected nations through; involvement of women in crime, limiting women from entrepreneurship activities and as such reduce the standard of living. This can be corrected if the government promotes equality and ensures investment in female entrepreneurship and education, introduce a feminine saving scheme to encourage savings among women, and ensure global partnership with women to ensure the national development of nations.

2.2.5 Huge public debt: this is a situation where a government owes a lender outside itself, it could include individuals, businesses, and/or agencies. Huge public debt affects the external debts of an economy thus, the increase in interest rate of national debt will lead to an increase in corporate debt which will have a long-term negative impact on the developments of a nation.

2.2.6 Violence and crime: According to The World Health Organization (1996) violence is an intentional use of physical power or force, actual or threatened against oneself, another person, or against a group or community that either result in or has a high likelihood of resulting in injury, psychological harm, maldevelopment, death, and deprivation. Crime is a misdemeanor that contravenes the law of the state that is strongly disapproved or forbidden by society and punishable by fine or imprisonment. Some examples are murder, burglary, robbery, child neglect, and failure to pay taxes. The cause of violence and crime can be traced to Social causes-

social disorganization, amoral individual upbringing, defective education, family planning, drinking, drug abuse, war, and post-war condition; Economic causes- poverty, unemployment, and industrialization, Psychological causes- intellectual weakness, mental diseases, and emotional instability; Biological causes- age, gender and body type and Geographical causes- the size of a country. Crime and violence can be reduced to a minimal level if Government help to provide well-paid employment for ex-offenders and applicant, install and monitor public surveillance cameras, reduce the rate of drop out students in graduate schools and ensure equitable distribution of national resource.

3.0 RESEARCH METHODOLOGY

The study seeks to demonstrate the role of IT in the development of African nations with a focus on Nigeria. Thusly with the aid of a credible survey, an ex post facto design was adopted that relies on previous studies to fill the current gap in the areas under investigation, thereof, secondary data were adopted constituting the population of all African countries, region, year of independence, population, Unemployment rate, Population below poverty line was sampled as at the year-end of 2020 to guide the discuss and inferences of the paper: *List with relevant parameters of Africa independent states as at 2020*

s/no	Country	Demographic			National development constraints	
		Region	Year of independence	Population	Unemployment rate (%)	Population below poverty line (%)
	Nigeria	Western Africa	October 1, 1960	206,139,589	7.96%	70
	Ethiopia	Eastern Africa	May 5, 1941	114,963,588	2.08%	30
	Egypt	Northern Africa	February 28, 1922	102,334,404	10.76%	28
	DR Congo	Middle Africa	June 30, 1960	89,561,403	9.47%	63
	Tanzania	Eastern Africa	December. 9, 1961	59,734,218	1.98%	23
	South Africa	Southern Africa	May 31, 1910	59,308,690	28.48%	17
	Kenya	Eastern Africa	December. 12, 1963	53,771,296	2.64%	36
	Uganda	Eastern Africa	October. 9, 1962	45,741,007	1.92%	21
	Algeria	Northern Africa	July 3, 1962	43,851,044	11.53%	23
	Sudan	Northern Africa	Jan. 1, 1956	43,849,260	16.54%	47
	Morocco	Northern Africa	March 2, 1956	36,910,560	9.02%	15
.	Angola	Middle Africa	November. 11, 1975	32,866,272	6.89%	37

	Mozambique	Eastern Africa	June 25, 1975	31,255,435	3.24%	46
	Ghana	Western Africa	March 6, 1957	31,072,940	4.33%	24
	Madagascar	Eastern Africa	June 26, 1960	27,691,018	1.83%	71
	Cameroon	Middle Africa	January. 1 1960	26,545,863	3.43%	30
	Côte d'Ivoire	Western Africa	August 7, 1960	26,378,274	3.42%	46
	Niger	Western Africa	August 3, 1960	24,206,644	0.49%	45
	Burkina Faso	Western Africa	August 5, 1960	20,903,273	6.41%	40
	Mali	Western Africa	September 22, 1960	20,250,833	7.34%	36

	Malawi	Eastern Africa	July 6, 1964	19,129,952	5.67%	51
	Zambia	Eastern Africa	October. 24, 1964	18,383,955	11.43%	54
	Senegal	Western Africa	April 4, 1960	16,743,927	6.68%	47
	Chad	Middle Africa	August. 11, 1960	16,425,864	1.94%	47
	Somalia	Eastern Africa	July 1, 1960	15,893,222	11.4%	
	Zimbabwe	Eastern Africa	April 18, 1980	14,862,924	4.99%	72
	Guinea	Western Africa	October. 2, 1958	13,132,795	4.3%	47
	Rwanda	Eastern Africa	July 1, 1962	12,952,218	1.04%	39
	Benin	Western Africa	August. 1, 1960	12,123,200	2.02%	36
	Burundi	Eastern Africa	July 1, 1962	11,890,784	1.41%	65
	Tunisia	Northern Africa	March 20, 1956	11,818,619	16.02%	16
	South Sudan	Eastern Africa	July 9, 2011	11,193,725	16.62%	
	Togo	Western Africa	April 27, 1960	8,278,724	2.01%	55
	Sierra Leone	Western Africa	April 27, 1961	7,976,983	4.44%	70
	Libya	Northern Africa	December. 24, 1951	6,871,292	18.63%	

	Congo	Middle Africa	August. 15, 1960	5,518,087		47
	Liberia	Western Africa	July 26, 1847	5,057,681	2.73%	54
	Central African Republic	Middle Africa	August. 13, 1960	4,829,767	3.7%	62
	Mauritania	Western Africa	November 28, 1960	4,649,658	9.55%	31
	Eritrea	Eastern Africa	May 24, 1993	3,546,421	5.17%	50
	Namibia	Southern Africa	March 21, 1990	2,540,905	20.59%	29
	Gambia	Western Africa	February. 18, 1965	2,416,668	9.11%	48
	Botswana	Southern Africa	September. 30, 1966	2,351,627	18.72%	19
	Gabon	Middle Africa	August. 16, 1960	2,225,734	20.15%	34
	Lesotho	Southern Africa	October. 4, 1966	2,142,249	23.41%	57
	Guinea-Bissau	Western Africa	September. 10, 1974	1,968,001	2.49%	67
	Equatorial Guinea	Middle Africa	October. 12, 1968	1,402,985	6.47%	44
	Mauritius	Eastern Africa	March 12, 1968	1,271,768	17%	8
	Eswatini	Southern Africa	September 6, 1968	1,160,164	22.08%	63
	Djibouti	Eastern Africa	June 27, 1977	988,000	10.30%	23
	Comoros	Eastern Africa	July 6, 1975	869,601	3.38%	45
	Cabo Verde	Western Africa	July 5, 1975	555,987	12.25%	30
	Sao Tome & Principe	Middle Africa	July 12, 1975	219,159	13.37%	66
	Seychelles	Eastern Africa	June 29, 1976	98,347	3%	39

Source: Field survey, 2021

4.0 Roadmap for Information Technology to facilitate the national development of Africa

Many nations regard the use of Information Technology as a driver for development and growth, however with its introduction years ago, the life expectancy and illiteracy rate in the African region has not risen to an appreciable value of significance. Thus, without sufficient

investment and involvement in IT, development in Africa will remain static. Sophisticated and properly designed InfoTech systems will help in improving markets, reduce public misconduct, and increase productivity through better management in both the public and private sectors. However, InforTech has been recognized as the engine for national development and economic empowerment of any country especially a third world country, thus, has helped the world by changing ways by which government agents react to National Development as an instrument for facilitating and fostering Economic growth. InfoTech has become the foundation of virtually every section of every rapidly growing economy in the world. These positive effects can be achieved in the African domain(a focus on Nigeria) to enhance national development through the following:

4.1.1 Automate Employment System (AES): Unemployment is a core setback to many economies specifically mixed systems like Nigeria. Government Agencies and corporate entities have tried to devise a means of balancing this mischievous and diversifying challenge but little or no effort has actualized over decades. AES can be achieved through the use of Software like Applicant Tracking Software (ATS) that will capture, centralize, and automate the employment system to avoid the case of dual employments and other malpractices, thus creating more employment opportunities for the unemployed populace.

4.1.2 Strong financial system: the financial system is a life wire and backbone of every economy as it plays an important role in promoting national development through the intermediation process of providing savings, credit, payment, and risk management products (surplus unit to the deficit unit of the economy) and whose component include; Money, financial instruments, central bank, financial institution, and financial market. A strong financial system tends to improve economic growth through the reduction of inequality and poverty (Ajakaiye, 2012). A financial system with banks as its major component provides linkages for different sectors of the economy and encourages a high level of specialization, expertise, economies of scale, and a conducive environment for the implementation of various government policies that will improve the development such as full employment (Sanusi, 2011).

4.1.3 Use of Artificial Intelligence (AI) to curb malfeasance: Artificial Intelligence is a rapidly advanced technology that uses the internet and simulation of human-like intelligence that can learn, reason, and plan, perceive, or process natural language and execute human capabilities. Artificial Intelligence is not the magic bullet for every economy but it is and will be a valuable tool for national development in the battle against malfeasance in poorperforming regions of a system. The use of AI in the public sector will help avoid misconduct through human capital management and automation of core administrative processes where large volumes of data and cumbersome exercises could be executed via computer programs that employ machine learning to learn and execute tasks at the highest level of efficacy and precision to ensure increased and better output, consumption, and as a consequence -increased income.

4.1.4 Increase of Internal Generated Revenue (IGR) of Tertiary institutions: Internal Generated Revenue is the creation of either tangible or intangible results within the confines of an entity in respect to funds that are realized through the efforts or operations itself i.e the funds that were not borrowed or realized through external means, funds not constituting the

proceedings of any loan, debt issuance, equity issuance, and asset sale, insurance recovery or indebtedness. An instance of IGR in Nigeria is in form of Education Counterpart Funding Scheme (ECFS) to fund the university system apart from the statutory grant that is received from the Government. Thus, the Federal Government does not have to accept responsibility for providing funding for all its universities on all its expenditure heading (Ventureline, 2012). It should be noted that Universities should extensively expand their IGR unit to source more funds for major activities and possibly remit and serve as a relief to the government as it is the supreme instrument for holistic national development when judiciously managed.

4.1.5 Improved Security Through Electronic Surveillance: According to Diffie & Susan (2008), surveillance is the monitoring of behavior, activities, or information for the purpose of influencing, managing, or directing. This can include observation from a distance by means of electronic equipment, such as closed-circuit television (CCTV), or interception of electronically transmitted information, such as internet traffic. It can also include simple technical methods, such as human intelligence gathering and postal interception. The use of electronic or computerized gadgets on/off a network to observe/monitor the activities and communications of an individual or organization or in other cases the device of a suspected third party is applicable to the overall safety of a nation's citizenry. This entails that surveillance can be used by governments for intelligence gathering to aid the anticipation and prevention of crimes, the protection of a process, person, group, or object, or the investigation of crime.

5.0 The Information Communication Technology Policy in Nigeria

The Nigerian Enterprises Promotion Decree or NEPC 1972 as amended in 1977 was meant to effect changes in the ownership structure of businesses in Nigeria and to provide an opportunity for indigenous capital to have assertive control of the economy. The law also restricted economic activities of foreign firms to certain areas and obliged the firms to add Nigerians as partners (Financial Times, 1980). This promulgation of the indigenization decree in 1977 led to the increase in the number of indigenous vendors of the computer business and stimulated more aggressive marketing by the vendor which in turn resulted in a significant increase in the number of computer installation and usage in Nigeria and led to the introduction of National Information Communication Technology Policy (NICTP) in 2012.

NICTP was primarily driven by a culmination of many consultations between government and ICT stakeholders whose objectives are to create a conducive environment for rapid expansion in network and service, access the system at a reasonable cost, and transform Nigeria into a knowledge-based economy. The introduction was linked to ensuring appropriate policies and legality, regulatory and institutional framework, and affordable, reliable, and bulk investment into ICT research, development, and monitoring, NICTP strive toward avoidance of cybercrime, unethical and moral malfeasance.

This policy was initiated to create laws targetted at guiding the development and harnessing the power of ICT, providing a framework for streamlining the sector and enhancing socioeconomic and development challenges while facilitating the transformation of Nigeria into a skill-driven economy for growth and development.

The Information Communication Technology sector is guided by the National Telecommunication Policy (NTP) 2000, National Mass Communication Policy, National Broadcasting Commission (NBC) Act 1992 (as amended), Nigeria Communication Act 2003, Nigeria Postal Service Act 2004 Cap 127 law of the Federation of Nigeria, national information technology policy 2000, NITDA Act 2007 and the wireless telegraphy Act law of the federation 1990. The long term strategic vision for the ICT Sector was elaborated in the National Development Plan (Nigeria vision 20:2020) document which states that:

‘The increasing globalization driven by ICT makes it imperative for Nigeria as an emerging market to irreversibly consider the application and promotion of ICT strategy to facilitate its rapid growth and development. This will involve the development of a vibrant ICT sector to drive and expand the national production frontiers in the agricultural, manufacturing, and service sector. It would require the application of the new knowledge to drive other soft sectors; governance, entainment, public service, media sector, tourism et cetera’.

Thus, the vision ensures that Nigeria as an economy is beyond a knowledge-driven nation rather a more skill-driven avenue where Information Technology can be harnessed as a major means to ensure national development and growth. NICTP focus on research, development, and innovation, safety and national security, software, and hardware production, local content and manufacturing, capacity building, ICT infrastructure, broadband, management of the scarce resource, investment and funding, regional/ international cooperation, and collaboration, transition from analog to digital broadcasting, legal framework, ICT and the environment, universal Access and service, hence NICTP has help harmonize various Information technology-related policies, law, and committee reports.

5.1 Conclusion

The knowledge of Information Technology is paramount for any concerned economy particularly the lagging regions like Africa that strive for development and growth in this decade, thus, it is evident that developing nations in Africa particularly Nigeria has been emphasizing the need for this development and growth in their economic performance but this has not yielded any expected result over decades. To ensure this feat, these developing nations need to invest more in Information and Technology for intense and rapid results in due course.

However, all threats, impediments, and strategies contained in this paper should form a basis for facilitating development in lagging regions like Africa in due course.

5.2 Recommendations in Policy Amendments Towards National Development

An overall adjustment in the mentality of the Nigerian citizenry in disfavor of abusing Information Technology as a tool of deceit, theft, exploitation, and misconduct forms the basis of a positive trend. The following recommendations to policymakers are deemed to ameliorate the current situation and help curtail the threats to IT as a tool for National Development in Nigeria.

1. Prioritizing Information Technology to facilitate National Development via the establishment of intensive learning and research institutes supported by skillful ICT personnel, sophisticated ICT tools, and gadgetry.

2. There is a need for adequate infrastructures, international partnership, innovation, and funding to develop IT models that will counter the current impediments to the system, encourage external investments for National growth.
3. There is a need for regular empirical studies to survey how a sophisticated Information Technology system affects huge debt profile, terrorist group, unemployment, and poverty rate in Africa.
4. Policies that encouraged ICT essential skills in the educational systems(graduate) as an indispensable subject should be enacted.
5. Ceremonial functions and dates appreciating demonstrated excellence via the use of ICT encompassing scouting and recognition for advances in ICT, the use of ICT to solve social challenges, etc should be enacted.
6. Initiating policies that encourage and support the development of partnership between government, private, foreign ICT institutes by providing good market, subsidy, and accessible grants.

References

- Abiola A. B., Folasade B. A., & Alexander E. O. (2015). Financial Inclusion and Economic Growth in Nigeria. *International Journal of Economics and Financial Issues* 5(3), 629-637, ISSN: 2146-4138, available at <http://www.econjournals.com>
- Ajakaiye, O. (2012), Cited in Simeon Ugwu CBN and achieving financial inclusion in Nigeria. *The Business Eye, Nigeria's. Investigative Business Journal*, Article No. 248. Available
- Berman, J. (2013). Vision Statement: Seven Reasons Why Africa's Time Is Now. *Harvard Business Review*, October 2013, 91(10): 34-35.
- Corruption a Delicate Subject." *Nigeria: Financial Times Survey. Financial Times*, 30 Sept. 1980, p. XLII. The Financial Times Historical.
- Deguara, A. (2008). *The faces of the poor: A sociological review of poverty in contemporary. Europe and Malta*. Retrieved from www.um.edu.mt/edrc/books/CD_CSP4/pdf/adeguara.pdf
- Diffie W, & Susan L, (August 2008). "Internet Eavesdropping: A Brave New World of Dollar , David and Roberta Gatti . 1999. *Gender Inequality, Income and Growth: Are Good Times good for Women?. Mimeographed. Washington CD: The World Bank*.
- Eugene O, Khalil Md & Nor Ghani Md (2010). Nepotism and tribalism in teams: An initial investigation. *Africa Journal of Business Management* Vol. 4(16), pp. 3508-3512, 18 November, 2010.
- Felicia I. O. & Hezekiah O. A. (2016). Internally Generated Revenue and Effectiveness of University Administration in Nigeria. doi:10.5539/jel.v5n2p1 *Journal of Education and Learning*; Vol. 5, No. 2; ISSN 1927-5250
- Josephine I. O (2012). Globalisation: The Nigerian Experience.
- Manfred Kochen(1990) Victor Janvier Bikai-Nyunai: Vision and design in education for information professionals. *JASIS* 41(5): 390
- Mutula, S. M., & Van Brakel, P. (2007). ICT skills readiness for the emerging global digital economy among small businesses in developing countries: Case study of Botswana. *Library Hi Tech*, 25(2), 231–245.
- National Information Communication Technology Policy (2012) the Ministerial Committee on ICT Policy Harmonization.

- Navneet (2018). INTRODUCTION OF CYBER CRIME AND ITS TYPE. IRJCS:: International Research Journal of Computer Science, Volume V, 435-439. doi://10.26562/IRJCS.2018.AUCS10080
- Okojie, C. O. (2010). Systems and strategies for funding Nigerian Universities. A paper presented at a lecture on innovative and administrative effectiveness of university administrators in Nigeria.
- Oyewo B. M. & Oyewole O. S. (2014) Financial System, Financial Inclusion and Economic development in Nigeria, *International Journal of Management Sciences*, vol. 2(3), pp 139-148.
- Ponelis, S. R. & Holmner, M. A. (2015). ICT in Africa: Building a Better Life for All *Information Technology for Development*, 21(2): 163-177.
- Random House Incorporated. (2009). Random House Webster's unabridged dictionary (2nd Ed.). Manhattan, USA: Random House Publishing. Retrieved from <http://dictionary.reference.com/browse/poverty>.
- Review of Public Administration and Management Vol. 1, No. 2, November 2012. ISSN: 23157844
- Sanusi, L.S. (2011), Banks in Nigeria and national economic development: a critical review, CBN Available from: <http://www.cenbank.org/>
- Tanzi V. (2002) corruption around the world: causes, consequences, scope and cures in G.T Abed & S. Gupta (Ed). *Governances, governance and Economic performance* (pp2545) *IMF*
- The Economist. (2014). Employment in Sub-Saharan Africa: Sorry, no vacancies. *The Economist*, March 29, 2014.
- Tousséa O. & Shoji U. (2009) Information technology transfer: Problems facing African developing nations. <https://doi.org/10.1080/10447319109525997> *International Journal of Human-Computer Interaction* Pp 79-93 Vol3, Iss 1
- United Nations. (1995). the Copenhagen Declaration and Programme of Action: World Summit for Social Development 6-12 March 1995, United Nations Department of Publications: New York.
- Ventureline.com. Retrieved December 18, 2019 from <http://www.ventureline.com/accounting-glossary/I/internally-generated-definition>.
- Wangenge O. G. & Cloete, N. (2008). Financing higher education in South Africa: Public funding, Non-Government Revenue and tuition fees. *South African Journal of Higher Education*, 22(4), 906-919.
- Wikinvest.com. Retrieved May 18, 2012 from [http://www.wikinvest.com/stock/CPI_International_\(CPII\)/Internally_Generated_Funds](http://www.wikinvest.com/stock/CPI_International_(CPII)/Internally_Generated_Funds).
- "Wiretapping". Scientific American Retrieved March 13, 2009
- World Health Organization (1996) Global Consultation on Violence and Health. Violence: a public health priority .Geneva, (document WHO/EHA/SPI.POA.2)
- Yekta S., M., Mahmoudi M., Bonab G., B., Zardkhaneh A., S. & Lotfi S. (2013) Designing an expert system to screen for autism: Investigating psychometric properties. *AWERProcedia IT & Computer Science*. pp 1074-1078 Available at www.awercenter.org/pitcs.