INFORMATION TECHNOLOGY AS CATALYST FOR GOOD GOVERNANCE AND ECONOMIC DEVELOPMENT IN NIGERIA

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ABSTRACT

It is well established fact that telecommunications infrastructure and services, in the age of information and transnational communication, are linchpins of a healthy, growing economy. ICT is the backbone of business activities, productivity, trade and social development. For a developing country like Nigeria and other West African countries, effective implementation of ICT policies is a precondition for the emergence of a strong market economy. This paper further established that ICT promotes good governance by increasing transparency, information accountability, promoting accurate decision making and public participation as well as enhancing efficient service delivery in all economies. However, political instability, lack of foreign interest due to poor state of infrastructure and state of insecurity, high cost of subscription and connectivity amongst others create a bottleneck in the role of ICT in the achievement of good governance and economic development in Nigeria. This paper posited that in Nigeria the digital divide that ICT set to bridge is still very evident at various levels. The paper, therefore, suggested that there is need for more debate, networking and action on ICT as a tool that can be used for varying degree of achievement, establishment of an enabling environment as well as forging public/private partnership.

Keywords: ICT, development, e-Nigeria, governance, Globalization, Good Governance

INTRODUCTION

The priority a nation accords the acquisition, storage, retrieval, management and utilization of information is an important indicator of its level of development. Indeed, information is being treated as a resource like energy and matter (porter, 2012). Some scholars have argued that information is a factor of production as authentic and critical as capital and labour. Indisputably, the world has transited from agricultural economy to industrial economy to service economy and currently to information economy. Therefore, this paper examines the various uses and application of IT in the developed economies and what practical lesson Less Developed Countries (LDCs) can deduce from this trend.

DEFINITION OF INFORMATION TECHNOLOGY (IT)

According to the Dictionary of Information Science (1998), information technology (IT) is seen as "the acquisition, processing, storage and dissemination of vocal, pictoral, textural and numerical information by a microelectronic-based combination of computing, telecommunications and video". Putting it succinctly, information technology in its strictest sense is the new science of collecting, storing, processing, and transmitting information (forester, 1990). IT is also viewed as "combination and integration of the technologies of computers, communications, audiovisual media, and especially microelectronic and their impact on

information handling (that is, on information and data capture, recording, storage, processing, retrieval and dissemination)."

In general, all the foregoing definitions of IT conceive it in essentially instrumental terms as no attempt is made to incorporate the human skills necessary for its operations. It must be emphasized that IT cannot function on its own without the direction of a human agent. The information systems industry considered technology first, people second (Andersen, 1991). Thus, leading to the incidence of installation of a strong technology system and yet maintain a weak human system. It is instructive that people who have to use the technology are a resource of unique knowledge.

It is against this backdrop that the UNESCO definition (stokes, 1985) of IT as "scientific, technological and engineering disciplines and the management techniques used in information handling and processing, their applications, computation and their interaction with men and machines, their associated social, economic and cultural matter", is adopted as a working definition of IT for this paper. It underscores the fact that IT is an interplay between man and machines.

METHODOLOGY

As past literatures are universally accepted as empirical studies that could be relied upon to support current assertions, the authors quoted past authorities to corroborate facts as exposed in this paper.

FACTORS ACCOUNTING FOR THE RISING GROWTH OF INFORMATION TECHNOLOGY (IT) IN THE WORLD ECONOMY

First, nearly every function of a firm can be enhanced in the long-term by some use of IT (parsons, 1983).

Second, more and more companies have offices and plants world-wide that are managed from a distance. The use of IT becomes integral to the coordination and management of human, financial and capital resources.

Third, internally, the demands of business to flexible, entrepreneurial, quality conscious, and sensitivity to workers needs lead to more IT for equality circles, manufacturing and office automation.

Fourth, the external environment of business is becoming more information intensive. Business must monitor and draw a broader array of economic, market place, political and social trends both domestically and internationally. These requirements led to the exponential use of IT for strategic planning and management, competitive intelligence systems and market research which in turn, demand more intense and sophisticated monitoring and analysis of external business environment (King, 1983).

Fifth, information technologies do not limit human interactions by geographical space but by "information space" thus expanding the possibilities of interactions without reference to geographic and time limitations or the modes of physical transportation (Masuda, 1980).

Sixth and lastly, is the convergence of technologies including the integration of video and broadcast technologies with computer and communication technologies.

ECONOMIC BENEFITS OF ICT

The economic benefit of telecommunications is enormous, both as growing industry in its own right and in terms of its influence on economic development. Telecommunications is making the world a smaller place and creating new information highways of high speed electronic data exchange. The economic implication of ICT are far-reaching; mobile telephones, satellite television, automatic teller machines, electronic card readers are just a few examples of the way in which ICT is changing how people communicate, become informed or do business as well as how nations coordinate electoral process.

The relation between ICT and economic development and benefit has been a topic of numerous studies. And all agree that there is a close relation. In a landmark research by Adoni, (2008); rural economic development implications of ICT in Nigeria in particular, the research found an interdependent relationship between economic activity and ICT infrastructure investment at state and country levels. With the advent of Global System and Mobile Communications (GSM) as introduced by the democratic government in power in the fourth Republic, the problems of inefficiency in telecommunication are now to some extent solved.

The findings of the various research works including this study support the conclusion that ICT investments affect economic activity and that economic activity affects ICT investments. And there is a serious reduction in Nigeria business costs resulting from telecommunications. Moreover, telecommunications brings about important technological change; openness, connectivity, decentralization and accessibility. It brings people together, links like-minded groups, saves cost of transport, business transactions take place without crossing the border, promotes self-employment such as phone booths and business centres to mention but a few.

Information and Communication Technology (ICT) network is the basic facility through which information needs of industry, commerce and agriculture can be satisfied. Industrial development requires the coordination of a series of operation, including the acquisition of supplies recruitment of labour, control of stocks, processing of materials, delivery of goods to buyers, as well as billing and record keeping. Information technology is vital to the effective development and control of many of these operations. Commerce essentially on information processing activity, effective buying, selling and brokerage rely on the continual supply of up-to-date information regarding the available of prices of goods and services. Farmers on the other hand, must not only grow food but they must sell effectively and buy seed and fertilizer. They also need information on weather conditions, disease outbreaks and new agricultural techniques.

ICT AND GOOD GOVERNANCE

Governance deals with the structures and dynamics of rule-making and collective action in society. Governance could be seen in broad terms as a system for steering and coordinating collective action (Esman, 1988). However, the realm of public action transcends notions of public delivery and state-led changes. Advances in IT offer potentially beneficial effects on governance. Technology convergence due to digitalization, wide band transmission, compression technologies, and standards development lends support for the low cost provision of public services such as health care and education (Hulme and Turner, 1997).

The pursuit of democratic governance could be fostered with a nation's access to a much greater diversity of communication sources network designs. This is facilitated by the unbundling of communication functions and services due to the emergence of competing technologies, the dispersal of intelligence through diverse communication networks, the demands of large users, and the institution of competitive markets.

According to Magno (2006), IT promotes good governance in three basic ways:

(i) By increasing transparency, information and accountability
(ii) By facilitating accurate decision-making and public participation
(iii) By enhancing the efficient delivery of public goods and services.

The citizens' right to gain access to public document is supported under the country's constitutional framework. Promotion of this right is pursued through the government's computerization program and the availability of these documents through the internet. Many government's agencies use IT facilities as a means to inform the public about their accomplishments, achievements, programs and plans. Although, the overall policy framework to guide IT use in government is being put in place in the country, there are still a number of concerns that will need to be addressed for the effective use of IT for good governance. These drivers and hurdles raise several issues for strategic inquiry and action.

CHALLENGES FACING ICT DIFFUSION AND ADOPTION IN NIGERIA

The major challenges facing the adoption of ICT in Nigeria include:

(a) Absence of adequate communication networks infrastructure
(b) Monopolistic tendencies among service providers and operators coupled with problems of interoperability.
(c) Lack of foreign interest in doing business as a result of lack of basic infrastructure and adequate security.
(d) Cost of connectivity
(e) Security issues and fraud
(f) Political instability/policy inconsistencies and government bureaucracies

(g) Lack of effective coordination and other regulatory issues
(h) High running and subscription costs.
(i) Relatively high cost of ICT products that is not affordable to the large low-income portion of Nigerians.
(j) Relatively low levels of support from the rank and file of people in government
(k) Problems associated with technical and management support for internet connectivity.
(l) Lack of control over important of ICT tools and equipment into the country.
(m) The challenges of sustainable wired and wireless networks
(n) Lack of good publicity and incentives to attract potential users
(o) Identification of information sources that meet the needs of users
(p) Poor quality of service of the internet and telecommunication services
(q) Effective management of network traffic and infrastructure.

Source: Ogechukwu N.I. and Charles C.O. (2006)
Philip A., Oluwatolani O., Adediran O., and Babajide A. (2009)

LESSONS FOR LESS DEVELOPED COUNTRIES (LDCs)

Although LDCs are imbibing elements of the new technology, yet they are far behind the developed economies in this respect. Most African states for example, are still very much engrossed in the mundane problem of feeding their teeming populations to border themselves with this nice-to have luxury" (Leff, 1983). However, LDCs stand to benefit immensely from the use and application of IT in the various operations. Indeed, many calls for re-engineering suggest that IT can be employed to effect significant organizational change (Cooper, 2000). New IT such as CASE (Communications, Manufacturing, and imaging systems) can increase degrees of freedom associated with organizational design by providing opportunities for organizational structures and functions that were previously not possible (Buitendam, 1999; Child, 1999; Child et al, 1999).

Similarly, with increasingly complex and competitive environment, re-engineered organizations made possible with new IT can be an important factor in achieving and maintaining competitive advantage (Applegate et al, 1993). Taking advantage of the hindsight in the use and application of IT in developed economies, LDCs can learn a number of lessons, thus guiding against improper automation of information. Proper automation is the one that sets out to solve problem adequately without creating new ones that are intractable. One of such lessons is that IT will change the technological profile of manufacturing and service industries. The main effect on the LDCs will be to increase the obsolescence of their industries, service and developmental strategies.

Secondly, fears have been expressed that automation will inevitably lead to higher unemployment (Menzies, 1999). Some scholars, however, do maintain a contrary position arguing that jobs will be created through the new technology (Authur, 1999). While the new

technology will displace same possibility is inexistence in respect of the LDCs which are dependent on the developed economies for the manufacture and spare parts of IT.

Thirdly, LDCs should note that technological developments such as personal computer and distributed processing organizations have made computer crimes much easier for all grades of staff. Conversely; there need to be checks against unauthorized or unintentional access which may not only allow people to acquire commercial or personally sensitivity information but can also lead to the corruption of the original data. Equally, there is the problem of small numbers of staff acquiring considerable power because of their ability to halt centralized processing system.

Fourthly, IT should be a means to an end in itself. A firm should use IT to support, reinforce or enlarge its business strategy.

Fifthly, training and retraining is a feature of IT. The quality of training not only affects people's abilities to operate equipment technically but also their overall confidence in and willingness to use the system. Inadequate attention to training has often led both to the limited use of the system and to limited flexibility and development of its compatibilities. Training cost is great; and the cost of non-training is greater.

Sixthly and finally, IT world is highly dynamic. No sooner is one technology launched than superior ones emerge. Powell (1999) argues that rapid pace of change in IT poses serious starting problems for any large IT investment. Any long-term, fixed project is almost obsolete before it has started and is certainly passed by the time it is fully installed.

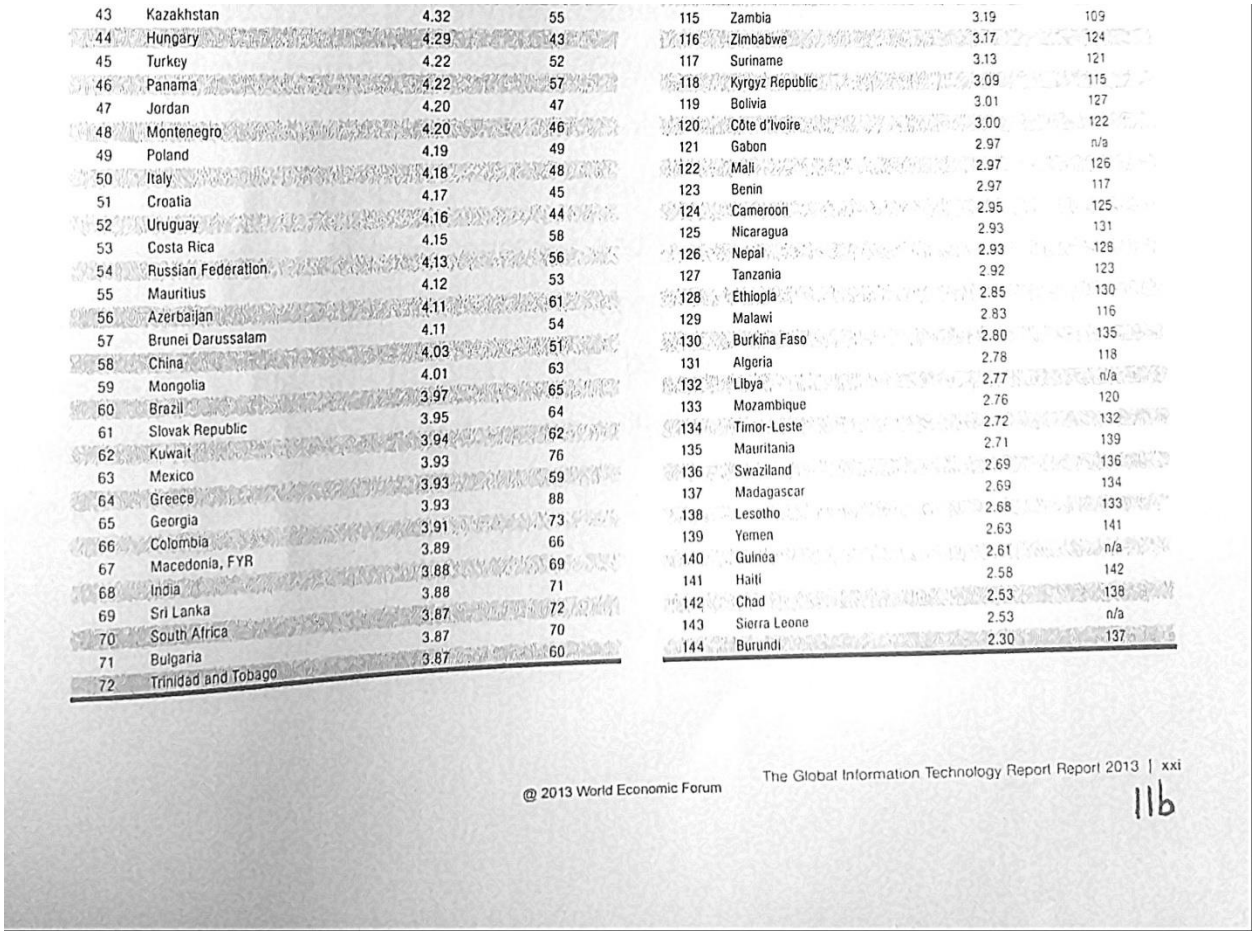
Although the use of IT is still hampered by the state of the electricity supply and the lack of reliable telecommunication facilities in the LDCs, office automation is beginning to gain currency in the LDCs, Nigeria in particular. Besides the use of computer, some offices are making use of a number of fairly intelligent equipment including reprographic, telex, facsimile machines and E-mail.

It is instructive to note that failure to automate does not lead to under-development. Rather, complications in automation compound the task of development. This is the main lesson for the governments, administrators, academics and business elite in the LDCs. Currently, a glance at the global information technology report of 2013, shows that Nigeria presently occupies a lowly position of 113 in the Networked ICT Readiness Index, a rank which is a step below the 2012 Networked ICT Readiness Index. (See table below).

The Networked Readiness Index 2013

Rank	Country/Economy	Score	2012 rank (out of 142)
1	Finland	5.98	3
2	Singapore	5.96	2
3	Sweden	5.91	1
4	Netherlands	5.81	6
5	Norway	5.66	7
6	Switzerland	5.66	5
7	United Kingdom	5.64	10
8	Denmark	5.58	4
9	United States	5.57	8
10	Taiwan, China	5.47	11
11	Korea, Rep.	5.46	12
12	Canada	5.44	9
13	Germany	5.43	16
14	Hong Kong SAR	5.40	13
15	Israel	5.39	20
16	Luxembourg	5.37	21
17	Iceland	5.31	15
18	Australia	5.26	17
19	Austria	5.25	19
20	New Zealand	5.25	14
21	Japan	5.24	18
22	Estonia	5.12	24
23	Qatar	5.10	28
24	Belgium	5.10	22
25	United Arab Emirates	5.07	30
26	France	5.06	23
27	Ireland	5.05	25
28	Malta	4.90	26
29	Bahrain	4.83	27
30	Malaysia	4.82	29
31	Saudi Arabia	4.82	34
32	Lithuania	4.72	31
33	Portugal	4.67	33
34	Chile	4.59	39
35	Cyprus	4.59	32
36	Puerto Rico	4.55	36
37	Slovenia	4.53	37
38	Spain	4.51	38
39	Barbados	4.49	35
40	Oman	4.48	40
41	Latvia	4.43	41
42	Czech Republic	4.38	42
43	Kazakhstan	4.32	55

Rank	Country/Economy	Score	2012 rank (out of 142)
73	Ukraine	3.87	75
74	Thailand	3.86	77
75	Romania	3.86	67
76	Indonesia	3.84	80
77	Moldova	3.84	78
78	Bosnia and Herzegovina	3.80	84
79	Seychelles	3.80	n/a
80	Egypt	3.78	79
81	Cape Verde	3.78	81
82	Armenia	3.76	94
83	Albania	3.75	68
84	Vietnam	3.74	83
85	Jamaica	3.74	74
86	Philippines	3.73	86
87	Serbia	3.70	85
88	Rwanda	3.68	82
89	Morocco	3.64	91
90	Dominican Republic	3.62	87
91	Ecuador	3.58	96
92	Kenya	3.54	93
93	El Salvador	3.53	103
94	Lebanon	3.53	95
95	Ghana	3.51	97
96	Botswana	3.50	89
97	Liberia	3.48	n/a
98	Gambia, The	3.47	101
99	Argentina	3.47	92
100	Guyana	3.45	90
101	Iran, Islamic Rep.	3.43	104
102	Guatemala	3.42	98
103	Peru	3.39	106
104	Paraguay	3.37	111
105	Pakistan	3.35	102
106	Cambodia	3.34	108
107	Senegal	3.33	100
108	Venezuela	3.33	107
109	Honduras	3.32	99
110	Uganda	3.30	110
111	Namibia	3.29	105
112	Tajikistan	3.29	114
113	Nigeria	3.27	112
114	Bangladesh	3.22	113
115	Zambia	3.19	109



43	Kazakhstan	4.32	55
44	Hungary	4.29	43
45	Turkey	4.22	52
46	Panama	4.22	57
47	Jordan	4.20	47
48	Montenegro	4.20	46
49	Poland	4.19	49
50	Italy	4.18	48
51	Croatia	4.17	45
52	Uruguay	4.16	44
53	Costa Rica	4.15	58
54	Russian Federation	4.13	56
55	Mauritius	4.12	53
56	Azerbaijan	4.11	61
57	Brunei Darussalam	4.11	54
58	China	4.03	51
59	Mongolia	4.01	63
60	Brazil	3.97	65
61	Slovak Republic	3.95	64
62	Kuwait	3.94	62
63	Mexico	3.93	76
64	Greece	3.93	59
65	Georgia	3.93	88
66	Colombia	3.91	73
67	Macedonia, FYR	3.89	66
68	India	3.88	69
69	Sri Lanka	3.88	71
70	South Africa	3.87	72
71	Bulgaria	3.87	70
72	Trinidad and Tobago	3.87	60
115	Zambia	3.19	109
116	Zimbabwe	3.17	124
117	Suriname	3.13	121
118	Kyrgyz Republic	3.09	115
119	Bolivia	3.01	127
120	Côte d'Ivoire	3.00	122
121	Gabon	2.97	n/a
122	Mali	2.97	126
123	Benin	2.97	117
124	Cameroon	2.95	125
125	Nicaragua	2.93	131
126	Nepal	2.93	128
127	Tanzania	2.92	123
128	Ethiopia	2.85	130
129	Malawi	2.83	116
130	Burkina Faso	2.80	135
131	Algeria	2.78	118
132	Libya	2.77	n/a
133	Mozambique	2.76	120
134	Timor-Leste	2.72	132
135	Mauritania	2.71	139
136	Swaziland	2.69	136
137	Madagascar	2.69	134
138	Lesotho	2.68	133
139	Yemen	2.63	141
140	Guinea	2.61	n/a
141	Haiti	2.58	142
142	Chad	2.53	138
143	Sierra Leone	2.53	n/a
144	Burundi	2.30	137

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CONCLUSION

From the context of this study, a sound conclusion can be drawn with emphasis that ICT policies in its economic and social development role, are just catalyst meant to aid national development. The benefits of ICT policies to a national economy should be measured as an input to other economic activities. And more importantly should also be considered as complementary to other sectors. ICT development is linked with and complements the development of industry, trade, farming, education, housing, health, electoral, planning and financial institutions. Also, ICT is associated with increase in level of transparency, information and accountability, accurate decision making and public participation as well as the enhancement of efficient delivery of public goods and services. It is this complementary role of ICT that makes it appropriate to link ICT planning to a national economic and social planning.

In addition, the solution strategy towards bridging the digital divide demands an aggressive human capacity building in ICT through training, brainstorming among technocrats, the government, seminars and workshops in collaboration with experts from home and abroad. Convergence of already existing neo-ICT tools such as mobiles phones will also assist in realizing Information and Communication Technologies for development goals. Borrowing from the experiences of other African countries and the advanced nations, bodies set up for the

implementation of Information Communication Technologies for development goals in Nigeria must be strengthened and research and development must be demand-driven focusing on the provision of products to meet local needs.

RECOMMENDATIONS

The following recommendations are made;

- There should be a continuous debate, networking and action on ICT as a tool used for varying degrees of achievement in order to increase the country's ranking in the Networked Readiness Index captured in the Global Information Technology Report in subsequent years.
- Federal government should formulate policies geared towards the implementation of IT in the country.
- Federal government should address the numerous challenges facing ICT diffusion and adoption in the country to enable the country reaps the full benefits of ICT.
- Furthermore, government should employ IT facilities as a means of informing the public about its achievements, policies programmes and plans as well as entertaining contributions and criticisms from the public.
- Lastly, there is need to ensure continuous training and retraining on IT adoption, given that the IT world is highly dynamic.

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