

The Place of (ICT) Sector on Economic Diversification and Poverty Reduction in Nigeria

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Abstract: *The study examined the Place of Information and Communication Technology (ICT) sector on Economic Diversification and Poverty Reduction in Nigeria. The specific objectives are, to ascertain the vocational opportunities in ICT sector for economic diversification and poverty reduction in Nigeria, determine how ICT sector creates inclusive business model for economic diversification and poverty reduction, to ascertain how to create effective human capital aimed at developing employees in ICT sector for economic diversification and poverty reduction, and to determine how ICT sector will facilitate the building of institutional capacity for economic diversification and poverty reduction. A descriptive survey research method was adopted. Stratified random sampling method was used to select 2000 self employed youths in ICT sector in the four (4) South East States Nigeria. The instrument of data collection for this study was questionnaires administered to self employed in ICT sector. Fifteen (15) questionnaire items that measured the place of ICT in economic diversification and poverty reduction in Enugu metropolis was presented. The techniques of data analyses adopted included the statistical weighted means, scores and standard deviation, and simple distribution table of frequency. The study reveals that the increasing global phenomenon and awareness on ICT sector opportunities will enhance the acquisition of necessary skills to diversify Nigerian economy and reduce poverty in our land. The study recommends among others that stakeholders in ICT sector should ensure provision and maintenance of infrastructural facilities necessary for ICT sector development, such as reliable supply of electricity, telecommunications network and transport.*

Key words: Information and Communication Technology, Poverty reduction, Inclusive Business Model, Effective Human Capital, Economic Diversification

1. Introduction

Nigeria's economy over the years has been predicated upon mono economy (crude oil) production and sales. But going by current realities, oil is no longer a viable economic mainstay. Globally, the price has nosedived and economies which made the mistake of putting their eggs in one basket are quickly looking for a way out.

Diversification, has however, been identified as the viable solution and that is where Nigeria is heading to for survival. Eventually, knowing what to diversify into is as important as the diversification itself and ICT sector has come to mind.

ICT sector is an enabler of change, an essential element of new developments, and a major contributor to globalization that has become part of daily life. Its impact is extensive, affecting individuals, businesses, industry sectors, communities and governments. It changes the way daily activities are accomplished and processes are executed and in doing so it also impacts social and economic development of countries and regions (Osuagwu, 2016)

The spread of ICT promoted the development of information society, where economic success and social development became more dependent on the availability and accessibility of Information and Communication Technology. Furthermore, ICT altered fundamental methodologies of doing activities and gave rise to e-services in communication, trade, employment, education, government, and health.

Recently we witnessed the increase of social media and mobile devices usage as they facilitate the interaction between citizens and their participation in decision-making processes. Today with the rise of knowledge societies and knowledge-based economies, the focus falls on value-added products and processes, placing more demands on ICT development, industry and government (Osuagwu, 2016)

Despite the importance of the ICT on development", studies both at global and regional levels in this area are still in their early stages. ICT development includes many types of infrastructure and services, ranging from telecommunications, such as voice, data, and media services, to specific applications, such as banking, education, or health, to the implementation of electronic

government (e-government). Each of these types has its own trends that vary across countries and regions.

Masiero (2013) observes that one of the most positive trends has been observed in voice communications. Thus, the proportion of mobile phone subscriptions in developing countries increased from about 30 percent of the world total in 2000 to more than 50 percent in 2004 and to almost 70 percent in 2007. In India, the total number of mobile phone subscriptions reached 851.70 million in June 2011, among which 289.57 million came from rural areas, with a higher percentage of increase than that in urban areas. Only about 35 percent of the population in developing countries has access to the Internet (versus about 80 percent in advanced economies) (Masiero, 2013).

Olivier (2010) observes that access to ICTs in the developing world has been framed through the concepts of digital divide and use / non-use. Market liberalization and competition as well as various regulatory and technical solutions are believed to be useful in closing the digital divide and ensuring the universal access to ICTs. The general perception is that people who have access to ICT will benefit from it, and those who don't would not benefits include boundless information sharing, connectivity, participation in the global economy (Olivier, 2010)

The use of mobile phones as part of ICT for development (ICT4D) initiatives shows some positive effects in improving access to information and services. For example, the arrival of mobiles brought reduction in the variability of price and the amount of waste in the fishing system along the Kerala coast, India. A study in Kenya identified innovation in mobile technologies for development, in particular the success of M-PESA mobile banking through the partnerships between private and public sectors (Wikipedia, 2016)

Another analysis of mobile phone use in developing countries shows that the use of mobile phones improves access to information, helps to address market inefficiencies, and can be used in disaster relief. In contrast, evidence from Ethiopia suggests that farmers use mobile phones to connect to those who are already in their social network, which limits the usability of mobile phones for wider information sharing and change in practices. Those who don't have access to technology run the risk of being marginalized and bypassed (Heeks, 2014)

This study tends to contribute to the global, national and regional level of diversification into ICT.

1.1 Statement of the Problem

High cost of living and high unemployment rate in Nigeria has become a source of worry. The economy of any nation is highly important to the growth and development of that Nation as well as the wellbeing which is nonetheless dependent on how effective those at the helm of managing such an economy do so. Nigeria in recent times have been threatened with alarming scenario as a result of unemployment which resultant effects ranges from extreme poverty, hunger to insecurity.

ICT is an enabler of change, an essential element of new developments, and a major contributor to globalization woven in the fabric of daily life. Its impact is extensive, affecting individuals, business, and industry sectors, communities and governments. It changes the way our daily activities are accomplished and processes are executed and doing it also impacts on economic growth and poverty reduction of countries and regions. The problem which this study tends to address therefore is to examine the “Place of ICT on diversification of Nigerian economy and poverty reduction”.

1.2 Objectives of the Study

The main objective of the study is to examine the place of ICT on economic diversification and poverty reduction. The specific objectives are to;

- Determine the vocational opportunities of ICT on economic diversification and poverty reduction in Nigeria.
- Determine the impact of creating Inclusive Business Model in the ICT sector for economic diversification and poverty reduction in Nigeria.
- Ascertain how to develop Human Capital through ICT sector aiming at developing employees for economic diversification and poverty reduction
- Determine how ICT can Build Institutional Capacity for economic diversification and poverty reduction in Nigeria.

1.3 Research Questions

- How does Vocational Opportunities in ICT sector influence economic diversification and poverty reduction?
- Creating Inclusive Business Model in ICT sector affects economic diversification and poverty reduction in Nigeria?
- How does ICT sector develop Human Capital aiming at economic diversification and poverty reduction?

- How can ICT sector build Institutional Capacity for economic diversification and poverty reduction in Nigeria?

2.0 Review of Related Literature

2.1 Information and Communication Technology (ICT):

Several definitions have been given to explain and interpret the acronym ICT and the one given below seems to be the closest:

‘ICTs are a generic term referring to technologies that are used for collecting, storing, editing and passing on (communicating) information in various forms.’ (Kundishora, 2014)

The above definition separates distinct fields of ICTs and at the same time links them together so as to operate as an entity.

It is now a fact as evidenced by developments from other countries that ICT as a sector can contribute immensely to the national GDP of a nation and that ICT, acting as an enabler, can result in improved market competitiveness of a nation’s products and services. ICTs can impact positively on governance and other sectors of the economy. In turn ICT can effectively assist international economic integration, improve living standards, narrow the digital divide, and improve biodiversity utilisation and management. (Kundishora, 2014).

At a time of slowed growth and continued volatility, many countries are looking for policies that will stimulate growth and create new jobs. Information communications technology (ICT) is not only one of the fastest growing industries – directly creating millions of jobs – but it is also an important enabler of innovation and development.

The number of mobile subscriptions (6.8 billion) is approaching global population figures, with 40% of people in the world already online. In this new environment, the competitiveness of economies depends on their ability to leverage new technologies.

Agu (2014) describes Information and communication Technology as a combination of Information Technology and Communication Technology. It merges computing with high speed communication link carrying sound and video. Information Technology (IT) deals with the collection, storage, manipulation and transfer of information using electronic means. Communication Technology (CT) refers to the physical devices and software that link various computer hardware components and transfer data from one physical location to another.

Computing and Telecommunications used to be quite distinct industry, involving distinct technologies. Now they have covered around certain key activities such as use of the internet.

2.2 Economic effects of ICT

Elena, (2013) observes that the following are the five common economic effects of ICT.

1. Direct job creation

The ICT sector is, and is expected to remain, one of the largest employers. In the US alone, computer and information technology jobs are expected to grow by 22% up to 2020, creating 758,800 new jobs. In Australia, building and running the new super-fast National Broadband Network will support 25,000 jobs annually. Naturally, the growth in different segments is uneven. In the US, for each job in the high-tech industry, five additional jobs, on average, are created in other sectors. In 2013, the global tech market will grow by 8%, creating jobs, salaries and a widening range of services and products (World Economic Forum, 2013)

2. Contribution to GDP growth

Findings from various countries confirm the positive effect of ICT on growth. For example, a 10% increase in broadband penetration is associated with a 1.4% increase in GDP growth in emerging markets. In China, this number can reach 2.5%. The doubling of mobile data use caused by the increase in 3G connections boosts GDP per capita growth rate by 0.5% globally. The Internet accounts for 3.4% of overall GDP in some economies. Most of this effect is driven by e-commerce – people advertising and selling goods online (Elena, 2013)

3. Emergence of new services and industries

Numerous public services have become available online and through mobile phones. The transition to cloud computing is one of the key trends for modernization. The government of Moldova is one of the first countries in Eastern Europe and Central Asia to shift its government IT infrastructure into the cloud and launch mobile and e-services for citizens and businesses. ICT has enabled the emergence of a completely new sector: the app industry. Research shows that Face book apps alone created over 182,000 jobs in 2011, and that the aggregate value of the Face book app economy exceeds \$\$12 billion.

4. Workforce transformation

New “micro work” platforms, developed by companies like oDesk, Amazon and Sam source, help to divide tasks into small components that can then be outsourced to contract workers. The

contractors are often based in emerging economies. Micro work platforms allow entrepreneurs to significantly cut costs and get access to qualified workers (Lee-Roy, 2013).

In 2012, oDesk alone had over 3 million registered contractors who performed 1.5 million tasks. This trend had spillover effects on other industries, such as online payment systems. ICT has also contributed to the rise of entrepreneurship, making it much easier for self-starters to access best practices, legal and regulatory information, and marketing and investment resources.

5. Business innovation

In OECD countries, more than 95% of businesses have an online presence. The Internet provides them with new ways of reaching out to customers and competing for market share. Over the past few years, social media has established itself as a powerful marketing tool. ICT tools employed within companies help to streamline business processes and improve efficiency. The unprecedented explosion of connected devices throughout the world has created new ways for businesses to serve their customers (Elena, 2013)

2.3 Emerging ICTs in the business Sector: Botswana experience

As well as traditional fax and fixed line communications, a range of emerging communication and information access technologies have become widely available in Botswana in the last 5 years. These include e-mail/internet access, mobile communications, satellite, (VSAT) extended microwave communications, and a range of value-added telecommunication end-user services. A number of these were considered (Ramkissoo, 2012)

E-mail

E-mail enables fast and relatively cheap communication internally, between networked computers, and externally, within the locality, regionally and world-wide. An e-mail message, and any accompanying computer files, can be sent via the phone line within a few minutes to any global destination. E-mail creates many advantages for business communication. Fore mostly, it is significantly cheaper and quicker than other methods of communication, including phone, fax and postal services. E-mail also enables the user to message multiple clients simultaneously, to re-route messages and to pick up messages whilst at different locations (Lee-Roy, 2013)

Within relatively isolated LDCs, such as Botswana, e-mail has been the fastest growing emerging technology amongst business users. The unreliability of existing mail services within a large geographically spread country has also encouraged adoption of e-mail. Within the survey sample approximately 50% of the responses were e-mail users. 66% used e-mail very often, 25%

used it quite often and only 9% didn't use it very often. Those who used e-mail very often was predominantly in the service sector from the technical services, IT and tourism sub-sectors covered in the sample.

Internet and World-Wide Web

Connection to the internet enables communication with a global network of computers, and access to enormous quantities of information, providing for multi-media content based on text, pictures, sound, graphics and moving images. The internet, as well as providing for e-mail, also gives access to information published on web-sites, from other commercial and non-commercial organizations. The internet also allows small companies to publish their own web-sites as a means of promoting their products/services. The internet also allows users to discuss common problems and interests through *User-groups* and *Newsgroups* (Jensen, 2007)

Levels of internet usage in Botswana have also grown rapidly in recent years, although not as fast as e-mail. Approximately 50% of those who responded to the survey had internet access. 43% used the internet very often, 33% used it quite often and 24% did not use it very often. When asked how important the internet was as a source of information for their business, 30% stated it was very important, 37% that it was quite important, 20% stated not very important and 13% not important. In terms of the effectiveness of the internet as a method of promoting products and services, only 13% of internet users regarded it as very effective, 20% said it was quite effective, 20% regarded it as not very effective and a further 47% had not used the internet as a business promotion tool (Heeks, 2014)

The results tend to indicate that at present in Botswana the internet is being used as a method of accessing information, rather than as a tool of business promotion, amongst internet users. However, a significant number of small business web-sites have been set up in Botswana mostly in the tourism sector and business services (Lee-Roy, 2013)

Local networking

Businesses can benefit from creating internal networks by connecting computers together by means of cabling. This enables them to communicate with each other, to share data files, printers and faxes. Computers can be linked within a single location known as a Local Area Network (LAN) or between multiple locations, known as a Wide Area Network (WAN). Internal

networks can also be connected to external networks such as the World Wide Web (Internet) (Donner, 2008)

Internal networking gives the potential to work faster, to work more efficiently and to have better internal communications. The extent to which businesses can benefit from internal networking, however, will be dependent on a wide range of other business management factors relating to the information needs of the enterprise, the level of internal information management and the available business management skills.

A total of 16 respondents had internal networking of computer systems. These were all 'information intensive' enterprises in the services sector covering technical services, IT and tourism. They all regarded further upgrading and continued expansion of computer-based management systems as being critical or very important for the future success of their businesses.

Mobile communications

Mobile communications based on new digital technology, allows business owners to answer calls, from customers immediately, and to reach staff working away from the office, no matter what their location. This can bring greater flexibility, faster customer response and time savings. In developed countries mobile phones are now part of the business fabric. In Botswana the growth in mobile communications, since their introduction in 1997, has been extremely rapid (Masiero, 2013)

Within the survey sample response 60% were mobile phone users. 43% used them very often, 24% used them quite often and 33% of owners didn't use them very often.

Mobile phone users were equally spread across all the manufacturing and service-based sectors covered in the survey. This figure is of course unrepresentative of overall SMMEs, but only suggests high levels of use by relatively well educated urban-based entrepreneurs.

Electronic commerce

Electronic commerce is one area, which is predicted, will have a significant effect on the SME sector. Electronic commerce, of course, is already used in Botswana, through the use of the telephone and credit cards, electronic payment and money transfer systems and smart cards. However, it is through the medium of the internet and on-line services that rapid expansion is likely to take place. The number of internet users is predicted to reach 300 Million world-wide

by the year 2000, having risen from a mere 4.5 million users in 1985. Although at present only a fraction of 1% of total worldwide transactions is via the internet, it is predicted this will grow to 3% by the year 2001 and to 15% by 2007. (Ramkissoon, 2012)

Within Botswana there is evidence of growth of network-based electronic commerce taking place in the tourism sector. The extension of the high speed telecommunications ring to the north west of the country, and the introduction of a local internet server, has enabled rapid adoption of internet/E-mail-based communication. Tourism operators are highly dependent on external communications, and interviews with Maun-based enterprises suggest that e-mail is now the preferred option for exchanging information with clients and parent companies, driven primarily by substantial cost savings and convenience factors. There is also evidence of a growth of direct bookings and payment utilising Botswana-based company web-sites (Olivier, 2010)

3.0 METHODOLOGY

3.1 Population, Sample Size and Sampling Technique

The population of this study is made up of selected self employed youths in ICT sector in the four South East States of Nigeria. The population size is 2000. The sample frame of this study comprised male and female self employed youths in Anambra, Ebonyi, Enugu, and Imo states of the South East Nigeria. Descriptive Survey approach was adopted and data were collected from 2000 respondents randomly. The questionnaires which served as the instrument for eliciting information were divided into two sections. The first section collected demographic information such as age, sex and educational qualifications, while the second section contained fifteen (15) items that measured the place of ICT on economic diversification and poverty reduction in Nigeria.

Out of the 2000 questionnaires distributed to respondents, 1800 were returned given a response rate of 90%. The responses were analyzed/ measured with simple distribution table of frequency and five (5) point likert –type scale, where strongly agree (SA) =5; Agree (A) =4; Disagree (D) =3; strongly disagree (SD) =2; Neutral (N) =1.

In analyzing the data, means, scores and standard deviation were used. A cut off point was determined by finding the means of the nominal values assigned to the responses. Thus $5 + 4 + 3 + 2 + 1 = 15/5 = 3.00$. For decision to be reached, mean scores of 3.00 and above were regarded as agreed statement while mean scores below 3.00 were regarded as disagreed statement.

4. DATA PRESENTATION AND ANALYSIS

SECTION A. Analysis of demographic Data.

Table 4.1 Demographic Information on Sex Distribution across the States

Zones	Male	%	Female	%	Total	%
Anambra	300	16.7	200	11.1	500	27.8
Ebonyi	360	20	130	7.2	490	27.2
Enugu	200	11	190	10.6	390	21.7
Imo	300	16.7	120	6.7	420	23.3
Total	1160	64.4%	640	35.6%	1800	100%

Source: Survey Data, 2017

Table 4.1 shows that out of 1800 questionnaires returned, 1160 or 64.4% respondents are males, while 64 or 35.6% are females.

Table 4.2 Distribution of Age across the Zones

Option	18-25	%	26-35	%	36-45	%	46-above	%	Total	%
Male	290	16.11%	380	21.11%	120	6.67%	120	7.77%	910	50.56%
Female	220	12.18%	380	21.11%	150	8.33%	140	6.67%	890	49.44%
Total	510	28.34%	760	42.22%	270	15%	260	14.44%	1800	100%

Source: Survey Data, 2017

In table 4.2 above, it could be observed that the highest proportion of the respondents i.e. 76(42.22%) were in the 26-35 age bracket, followed by 18-25 years age group with 510(28.34%) respondents across the zones. Respondents between the ages of 36-45 were 270 (15%) while those at 46 and above were 260 (14.44%) of the respondents. We observed that about 85.56%

of the self employed in ICT sector were youths i.e. 18-45 years, thus creating age balance between the self employed youths. It shows that the employment in ICT sector is high among the middle aged respondents.

Table 4.3 Distribution of Educational Qualification

Option	WASC	%	OND/ NCE	%	BSC/ HND	%	MSC/ PhD	%	Total	%
Male	150	8.33%	220	12.23%	380	21.11%	140	7.77%	890	49.44%
Female	120	9.45%	290	16.11%	380	21.11%	120	6.16%	910	50.56%
Total	270	15%	510	28.34%	760	42.22%	260	14.44%	1800	100%

Source: Survey Data, 2017

Table 4.3 shows the educational qualifications of the respondents of the study. It was discovered that most of them have first degree i.e. BSc/HND which represents about 760 or 42.22%. 510 or 28.34% hold OND/NCE, 260 or 14.44% have Masters Degree and other professional qualifications. 270 or 15% of the respondents hold WASC. Further studies revealed that those found engaged in self employment in ICT sector hold OND and above and are between the ages of 18-45 years old. The reason could be to have a crop of youths that can easily adapt to the ever changing technological environment.

SECTION B

Table 4.4 Rating of Respondents on Vocational Opportunities in ICT sector

S/N	Questions	SA	A	D	SD	N	Mean
1	Vocational opportunities in ICT are acquired through proper training in vocational schools.	500 (27.79)	460 (25.56)	400 (22.22)	340 (18.89)	100 (5.56)	3.13
2	Vocational opportunities in ICT are acquired through apprenticeship with knowledgeable practitioners?	490 (27.22)	500 (27.79)	410 (22.78)	280 (15.56)	120 (6.67)	3.53
3	Vocational opportunities in ICT sector are gotten through expression of talents and skills?	460 (25.56)	500 (27.77)	340 (18.89)	400 (22.22)	100 (5.56)	3.46

Source: Analysis of Survey Data, 2017

Table 4.4 above was used to measure and analyze how vocational opportunities are acquired in ICT sector for economic diversification in Enugu metropolis. The response shows that about 960 (53.33%), agreed that vocational opportunities in ICT are acquired through proper training in vocational schools, while 740 (41.11%), disagreed. With a mean score of 3.13, it shows that respondents accepted that there are lots of vocational opportunities in ICT that are acquired in ICT sector in meeting the country’s man power needs. 990 (55.10%) agree that vocational opportunities in ICT are acquired through apprenticeship with knowledgeable practitioners. While 690 (38.34%) disagreed. 960 (53.33%) respondents agree that vocational opportunities in ICT sector are gotten through expression of talents and skills, While 740 or 41.11% of the respondents disagreed. Judging from the responses, it has been established that ICT will increase the vocational opportunities of youths in Nigeria.

Table 4.5 Rating of Respondents on Creation of Inclusive Business Model by ICT sector

S/N	Questions	SA	A	D	SD	N	Mean
4	ICT sector target local individual, household and SME markets for sale of technologies and services?	340 (18.89)	400 (22.22)	460 (25.56)	500 (27.77)	100 (5.56)	3.21
5	ICT sector supports the development of local partner network in developing Nigeria?	500 (27.77)	490 (27.22)	410 (22.78)	280 (15.56)	120 (6.67)	3.45
6	ICT sector creates opportunities for local business to start up and grow?	410 (22.78)	280 (15.56)	490 (27.22)	500 (27.77)	120 (6.67)	3.40
7	ICT sector sale to local market through horizontal deepening and vertical deepening?	490 (27.22)	120 (6.67)	500 (27.77)	410 (22.78)	280 (15.56)	3.7

Source: Analysis of survey Data, 2017

Note: SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree, N = Neutral

Table 4.5 above was used to measure and analyze the ICT sector on creation of inclusive Business model. The responses were on ICT target of local individual, household and SMEs markets for sale of technologies and services. About 740 or 41.11% agree that ICT target on local individual, household and SMEs market will enhance economic diversification and poverty reduction. While 1060 or 58.89%, disagreed, but a mean score of 3.21 indicates acceptance that ICT target on individual, household, and SME markets contributes to economic diversification. The table also shows that items 5, 6, and 7 have mean scores of 3.45, 3.40, and 3.7. This suggests

that all the options agreed that creation of Inclusive Business Model will enhance economic diversification and poverty reduction.

Table 4.6 Rating of respondents on how to develop Human Capital through ICT sector

	Questions	SA	A	D	SD	N	Mean
8	ICT sector develop effective use of technology to expand economic opportunities at national, organizational and individual level with certain set of skill?	400 (22.22)	490 (27.22)	500 (27.79)	300 (16.67)	110 (6.11)	3.43
9	It Employ deliberate human capital development strategies aim at developing employees, business partners and customers both present and future?	500 (27.79)	460 (25.56)	400 (22.22)	340 (18.89)	100 (5.56)	3.13
10	ICT enables the creation of robust education initiatives designed to contribute to a steady pipeline of potential employees and business partners?	460 (25.56)	500 (27.79)	340 (18.89)	400 (22.22)	120 (6.67)	3.46
11	ICT sector enhance implementation of Technical literature programs?	490 (27.22)	500 (27.79)	410 (22.78)	280 (15.56)	110 (6.11)	3.53

Source: Survey Data, 2017

Table 4.6 above was used to measure and determine how to develop Human Capital through ICT sectors. The responses were on the need to develop effective use of technology to expand economic opportunities at national, organizational and individual level with certain skills. 890 or 49.44% are of the opinion that there are needs to develop effective ICT to expand economic opportunities at national, organizational and individual level with certain skills, While 800 or 44.46% of respondents refuted the idea. Employing deliberate Human Capital development

strategies aimed at employee, business partners and customers were considered. 960 of 53.35% agreed to the idea, while 740 or 41.11% disagree. 960 (53.35%) were of the opinion that creation of robust educational initiatives designed to contribute to the steady pipeline of potential employees and business partner was advocated. 740 (41.11%) felt otherwise. Implementation of Technical literature programs was supported. 990 (55.10%) respondents throw their weight at the idea while 690 (38.34%) disagreed.

Table 4.7 Rating of Respondents on building Institutional Capacity through ICT sector

	Questions	SA	A	D	SD	N	Mean
12	ICT recognize and speed up administrative procedures, increase the volume and speed of information and permit greater collaboration and sharing of experience?	460 (25.56)	500 (27.77)	340 (18.89)	400 (22.22)	100 (5.56)	3.46
13	ICT Introduces sales strategies that have direct institutional capacity- building effects?	410 (22.78)	280 (15.56)	490 (27.22)	500 (27.77)	120 (6.67)	3.40
14	ICT sector engages in dedicated efforts to build institutional capacity that may target local universities and research institutes, industrial associations, training and business development services providers?	340 (18.89)	400 (22.22)	460 (25.56)	500 (27.77)	100 (5.56)	3.21
15	ICT sector targets government, non-profit, and collaborative institution such as e-government.?	490 (27.22)	120 (6.67)	500 (27.77)	410 (22.78)	280 (15.56)	3.7

Source: Analysis of Survey Data, 2017

Table 4.7 was used to measure the need for building Institutional Capacity sector for ease of economic diversification. All the items with mean scores of 3.46, 3.40, 3.21 and 3.7 agreed that building of dedicated Institutional Capacity by recognizing and speed up administrative procedures, increased volume and speed of information and permit greater collaboration and sharing experience, introduction of sales strategies that have direct institutional capacity,

engaging in dedicated efforts to build institutional capacity that may target local universities and research institutes will enhance economic diversification and poverty reduction in Nigeria.

5.0 Discussion of Findings

The study examined the place of Information and Communication Technology (ICT) sector on economic diversification and poverty reduction in Nigeria. Table 4.1, 4.2, and 4.3 analyzed the demographic data. Table 4.1 indicated that the sex distribution has about 64.4% respondents as male and the remaining 35.6% of the respondents were female. Table 4.2 shows that about 70.56% of the self employed in ICT sector with age bracket of 18-45 years were youths. This shows that self employment into ICT sector is high among the middle aged respondents. Table 4.3 reveals that those found to engage in self employed into ICT sector holds OND and above and are between the ages of 18-45 years old. The reason could be to have a crop of self employed into ICT sector that can easily adapt into the ever changing technological environment. Table 4.4 was used to measure the rating of respondents on Vocational opportunities in ICT sector. All the items in the table with the following mean scores, 3.46, 3.53 and 3.13 agreed with the options that Vocational opportunities in ICT sector could be acquired through proper training in vocational schools, through apprenticeship with knowledgeable practitioners or through expression of talents and skills. Oladunjoye and Audu (2014) observes that ICT sector has several vocational areas as special means of providing services which include, networking, programming, repairing and maintenance, computer sales, phone sales, parts and accessory sales, document processing and phone calls etc. In table 4.5, the analyses of the result were on creation of Inclusive Business Model by ICT sector. The study reveals that ICT sector targets local individuals, household and SME markets for sale of technologies and services. The statement was backed up with 3.21 mean score which was an agreed position. Other items with mean scores of 3.45, 3.40, 3.70 agreed that ICT sector encourages the development of local partner network, creation of opportunities for local business to start-up and grow and sale to local market through horizontal deepening and vertical deepening. Williams, Beth and Katz (2010) observes that there are two essential and inter local growth strategies in the ICT sector which can be characterized as horizontal deepening and vertical deepening. These entails adding new and grow market by connecting technology more directly to opportunities and services that increase productivity, income and quality of life thus is strengthening its value proposition to the purchaser. Vertical deepening can be seen as a strategy for achieving horizontal deepening and

for increasing revenue per customer. For instance, mobile telephony on its own brings a host of potential benefits for users, it can substitute for travel, help keep social and business relationships intact, permit access to information, facilitate job search and enable entrepreneurial activities. Table 4.6 analyzes the need for the development of human capital through ICT sector. The study reveals that effective use of technology expands economic opportunities at national, organizational and individual level with certain skills. The statement was backed up with 89 or 49.44% respondents. Other items with mean scores of 3.13, 3.46 and 3.53 all agreed that ICT sector lays the groundwork for firm's own individual future market growth, implement technical literacy programs, help to grow technology users regardless of which technologies they are using (William, Beth and Katz,2010). Table 4.7 analyzes building institutional capacity through ICT sector. It was observed that ICTs fundamentally creates institutional capabilities and as such engage in dedicated efforts to build institutional capacity. They targeted local universities and research institutes, industry associations, training and business development services providers, and other institutions vital to the development of healthy local ICT ecosystem.

5.1 Conclusion

This study was conducted to examine the place of Information and Communication Technology on economic diversification and Poverty reduction in Nigeria. It is a known fact that ICT sector is an enabler of a wide range of economic opportunities and benefits for users. This is because of its crosscutting nature thus affecting all sectors of Nigerian economy. Building an ICT sector based economy requires developing long term strategic focus and recognizing that the benefits are not always immediate or direct. For instance, it has taken Malaysia, Brazil and India over ten years to develop an international competitive ICT sector and even after ten years, the impact on development is still not conclusively evident. This agrees with Nwaogu (2016) Technology demands business models that allow them to become part of the fabric of society. Among low-income individuals and SMEs, business Model innovations such as low-cost distribution systems, value added content and service partnerships, and appropriate financing options have all been critical in this regard.

Holistic adoption and proper utilization of ICT will lead to increased yields and quality production of goods and services in Nigeria.

5-2 Recommendations

In the light of the findings, the following recommendations were made;

- Structured training programmes must be developed and provided for those who left the education mainstream before the advent of ICTs including those at workplaces and life-long learners in general.
- Stakeholders in ICT should embark on extensive educational and training programmes to provide adequate supply of qualified ICTs personnel and knowledge workers in all sectors of Nigerian economy.
- Stakeholders in ICTs should ensure provision and maintenance of infrastructural facilities necessary for ICTs development, such as reliable supply of electricity, telecommunications and transport.
- There should be mindset change on the part of the Government, stakeholders and Nigerians in general. Government must undergo internal and external transformation in order to move in unison with the private sector and respond swiftly to ICT developments and its dictates.
- Internally, government are called upon to improve the efficiency and effectiveness of internal functions and processes within government departments and institutions through internetworking while externally government are called to be more transparent and give citizens access to government information
- Government should create an enabling environment that will provide equitable access to ICTs enabled education and training in all parts of the country, including the disadvantaged communities.
- Government should formulate policies that will govern ICTs and regulatory mechanism to monitor and manage operations in the ICTs sector.
- Government and stakeholders should lower the cost of PCs for targeted population, groups and relaxation of import duties, tax breaks and assurance that investors can regularly repatriate their investment.
- Government should offer incentives that foster knowledge economy. Numerous examples indicate that access to reliable and steady sources of funding is essential to ICT sector and technological growth and sustainability.

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