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**ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN
PROMOTING TRADE IN NIGERIA**

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ABSTRACT

This study examined the role of Information and Communication Technology in facilitating trade in Nigeria. The descriptive research design was adopted for the study. The data was collected through a structured questionnaire. Forty members of the public and 60 major stakeholders in the public and private sectors of the economy that constitute the trade and investment sector of the economy were randomly and purposively selected for the study with a view to eliciting their perceptions on the role of ICT in supporting trade. This resulted in a sample size of 100. The study showed that there was a consensus opinion that Information and Communication Technology has fostered trade in Nigeria through improved market reach, better internal and external communication, gateway to information and knowledge, enhancement in managerial decision making, enhancement of customer relationships, increased efficiency, opportunities of e-commerce, product development, market development, transformation of business, business integration, e-mail adoption, and internet presence. In addition, the result revealed among others that improved market reach was the ultimate role of Information and Communication Technology in stimulating trade in Nigeria. Nevertheless, it indicated that product development was the least role of Information and Communication Technology in supporting trade in Nigeria. The study, therefore, recommends among others that: appropriate legislation should be passed by the government for the protection of ICT infrastructures and checking cybersecurity, there is a need for more investments in ICT infrastructures and sponsorship of ICT educational programmes with a view to enhancing ICT skills and knowledge for stimulation of trade, Government should initiate specific ICT policies for fostering an efficient and effective trade and investment subsector, the government should waive tax and import duties for telecom investors and operators to encourage

them to enter the Nigerian telecom market, and the government should address the insufficient supply of electricity for the implementation of various initiatives by it and the private sector for the promotion of ICT.

Keywords: ICT, Trade, Nigeria

I. Introduction

The role of the transformation in Information and Communication Technology (ICT) in fostering trade in particular and national developments, in general, cannot be overemphasized. Information and communication technology is a veritable tool with the capacity of boosting viable economic and social developments in both the developing and developed countries of the world. ICT is a sine qua non in all stages of developments of the sectors of the economy ranging from the health, education, transportation, manufacturing, agricultural, trading, financial, entertainment, and service sector from beginning to the end. In the contention of Oloruntoyin and Adeyanju (2013), ICT will become a facilitating force for viable societal development when it is successfully incorporated into an agenda that envisages community or citizen participation and information sharing. Evidence from the literature shows that the expansion of ICT infrastructure can enhance the livelihoods of the poor, support economic diversification besides boosting economic growth (Makepe, Montsi, and Njoku, 2012). The success stories of the Asia continent had shown that focusing on the production of ICT can stimulate trade and foster economic growth in return (OECD, 2005).

This was further corroborated by Brooks (2008), who opined that prompt development of accompanying infrastructure facilitated and boosted trade expansion in Asia. The adoption and implementation of Information and Communication Technology (ICT) has been an influencing factor to the attainment of overarching objectives of the United Nations regarding development targets as entrenched in the 2030 Agenda for Sustainable Development adopted by it in 2015, particularly the eighth and ninth pillars of the Sustainable Development Goals (SDGs) that proposes to “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”, and “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation” respectively (Osborn, Cutter and Ullah, 2015, p. 6). Given the aspiration of Nigeria to become among the 20 top economies in the comity of nations by 2020, the mission of realizing the SDGs with far-reaching economic, environmental and social implications will depend on the adoption and implementation of Science, Technology and Innovation (STI).

As observed by Hamel (2010), the World Summits on the Information Society (WSIS) conceived by the United Nations in 2003 and 2005 aided governments, development practitioners and international donors to reflect on the possible impacts of ICTs in global development. As a result of the summits, ICTs was situated as a veritable tool that has the capacity to serve as a vehicle for the attainment of the Millennium Development Goals (MDGs) and for dealing with national development concerns. World Bank (2002) stated that ICTs are devices or methods that permit recording, storing, expending, disseminating and retrieving electronic information. On the other hand and in the contention of UNDESA (2009), ICTs are “tools that facilitate communication and the processing and transmission of information and the sharing of knowledge by electronic means”. These tools include a computer, internet, hardware, software, telephone, radio, television etc (Bakare, 2014, p. 9).

The findings of some scholars in the ICT and international trade literature is that ICT encourages trade (Rauch, 2001; Rauch and Trindade, 2002; Freund and Weinhold, 2002, 2004; Swenson, 2004; Albuquerque, Loayza, Seven, 2005; Greaney, 2005, 2009; Clarke and Wallsten, 2006; Tang, 2006; Vemuri and Siddiqi, 2009; Choi, 2010; Ahmad, Ismail and Hook, 2011; Thiemann, Fleming and Mueller, 2012; Liu and Nath, 2013; Kurihara and Fukushima, 2013; Lapukeni, 2015; Kern, 2018). In the contention of Schumpeter (1883-1950), economic development is a vigorous procedure

originating from industry and trade. As cited in Kern (2018, p. 1), developments in technology and innovations, such as the social media (Hennig-Thurau, Malthouse, Friege, Gensler, Lobschat, Rangaswamy, and Skiera, 2010, p. 311), electronic payment (Sumanjeet, 2009, p. 18), data mining (Bagga and Singh, 2012, p. 19), Internet, e-commerce (electronic commerce) (Jahanshahi, Zhang and Brem, 2013, p. 849), and RFID (Radio-frequency Identification) systems (Jones, Hillier and Comfort, 2005, p. 395) have substantially transformed numerous features of international trade in goods and services and have developed into fundamental components of the procedures of trade.

There is a link between ICT and globalization. As contended by Pohjola (2002, p. 138), given that developments in ICT remove geographical boundaries and enable trade, global networks, information and knowledge sharing and communication, technology acts as a vehicle for globalization. In a similar vein, globalization is a facilitator of developments in the discipline of ICT. This is based on the premise that the process of globalization entails an improvement in information flows, ideas and knowledge, reduction in costs of communication and the spreading out of technology infrastructures (Argandona, 2003, pp. 9-10; Aydin and Savrul, 2014, pp. 1268-1275). Hence, the process of globalization has a meaningful effect on trade. This is because it facilitates the internationalization of the economy and reduced barriers to trade (Kern, 2018).

However, the various avenues through which ICT reinforces trade include: improved service delivery and transparency, effective data flow, computer inter-connectivity, internet access, mobile phones, digital video conferencing, e-mail, multimedia, creation of a global village, overcoming of trade-related barriers, reduction in time and disadvantages of location, efficiency and effectiveness of the customs service, information sharing among stakeholders within and across national boundaries, paperless trade documentation, electronic business transaction, access to instant market information, ability of business to reach a global audience, access to global markets, improved communication, integration of markets across the world, efficient and competitive markets, strong information flows, change from industrial society to information society, and industrial economy to knowledge economy.

Other avenues are business growth, production of goods and services on time, buying and selling products online, penetration of new markets, production of new products, promotion of products, monitoring of consumer behaviour, Voice over Internet Protocol (VoIP) (Berisha-Shaqiri, 2015, p. 76), change of business processes from physical reality to digital reality (Berisha-Namani, 2010, p. 53), enhancement of competitive advantage, efficient allocation of resources, news about access to resources and management of such resources cost-effectively (Bankole, Osei-Bryson and Brown, 2011b), international competitiveness (Fagerberg, 1997, p. 2), access to new markets, innovation and productivity, improved accountability, optimization of enterprise resources and enhancement of business performance, change in quality of services, creation of new business models, and reduction in the cost of storing, accessing and exchanging information,

Past systematic studies in Nigeria centred on the impact of information technology on the Nigerian economy (Kajogbola, 2004); the impact of ICT on internal control's prevention and detection of fraud (James, 2013); the impact of ICT on Small and Medium Scale Enterprise Productivity in Nigeria (Oluwafemi, 2015); and the perception of electrical engineering trade teachers on the use of ICT for teaching in technical colleges (Duhu, Mbagha, Quahha, Danzaria, 2014). Evidence from an extensive literature search to the best of our knowledge showed that there is a dearth of study on the nexus between ICT and trade. In addition, the facilitation of trade in Nigeria is confronted by many challenges in the domain of ICT. These include inclusion of ICT in the development strategy without tackling other vital components of the equation of development, access to information, lopsided access and low level of telephone penetration, inadequate capacities for the management of ICT, poor investment in ICT, insufficient manpower for hardware maintenance, dearth of innovation, existing technology that is mostly obsolete, high cost of purchasing diesel – an estimated 288 million USD is

spent by telecom operators to purchase diesel for the 20,000 generators located in over 15,000 sites in Nigeria (Sekkat, 2016, p. 5) and impediments in sourcing of ICT parts, components and peripherals.

Despite the attempts by successive governments in Nigeria to ameliorate these problems through avenues such as the initiation of the Wireless Telegraphy Act, Laws of the Federation in 1990; National Mass Communication Policy; National Broadcasting Commission (NBC), Act 1992 as amended; the National Telecommunications Policy (NTP) in 2000; National Information Technology Policy in 2000; Nigerian Communications Act, 2003; Nigerian Postal Service Act 2004 Cap 127 Laws of the Federation of Nigeria; National Information Technology Development Agency (NITDA) Act 2007 which was the legal stand for the establishment of NITDA; a 120% tax deduction for Research and Development (R & D) expenses sustained by ICT training companies; five undersea cable systems with more than 100 000 km of terrestrial fibre-optic cable, connecting Nigeria to Europe and the US boosted data capacity to over 12Tbps (Sekkat, 2016, p. 5), importation and use of a wide range of durable consumer electronics, computers and telecommunication equipment; provision of tax incentives and seed capital to ICT startups; Nigeria being a member of the consortium that runs the SAT-3 submarine fibre optic cable (Agyeman, 2007, p. 3); enhancement of the penetration rate; five years import duty waiver on computer components used for assembly of hardware; launching of first communication's satellite - NIGCOMSAT-1 in 2007; increase in ICT investments; the country had continued to perform below the optimal level irrespective of the obvious need for economic growth and development through trade. This had exerted a deleterious effect on the capacity of trade to engender economic growth in Nigeria. Given the foregoing, and if Nigeria is not to be found wanting in developments in global trade, there is a need to carry out a probe on the role of ICT in stimulating trade in Nigeria.

The research question that will be addressed in this study is: What is the nexus between ICT and trade in Nigeria? The objective of this paper is to examine the relationship between ICT and trade in the Nigerian setting. The rest of the paper is organized as follows: The next section provides the literature review and theoretical framework, followed by a discussion of the methodology in Section 3. Section 4 centres on data presentation and discussion of results while section 5 concentrates on conclusion and recommendations.

2. Literature Review and Theoretical Framework

2.1 Nexus between Information and Communication Technology and Trade

In view of the significance of ICT in stimulating trade with the notion of fostering economic growth in the field of development economics, there is an avalanche of literature globally with diverse results and deductions. In Asia, Kurihara and Fukushima (2013) employed the gravity model to investigate the impact of the existing internet on international trade on one hand and the impact of existing internet on economic growth on the other hand. The results revealed that the internet stimulates international trade both in developing and developed Asian countries. Nevertheless, the effect was more in advanced Asian countries than in developing ones. Furthermore, it was evident from the result that the internet did not foster economic growth in Asian countries.

In a similar manner, and in a study centred on the panel data of 36 trading partners, Ahmad, Ismail, and Hook (2011) employed the gravity model to investigate the impact of ICT infrastructure on trade in Malaysia using a number of indicators for the ICT infrastructure from 1980 to 2008. The results revealed that internet users, personal computers and fixed-line telephone subscribers, utilized as proxies for ICT infrastructure had a positive and significant effect on the worth of bilateral trade between Malaysia and its trading partners. The result is an indication that ICT infrastructure development plays a major role in realizing higher intensities of exports in Malaysia.

Lapukeni (2015) investigated the relationships among financial inclusion, Informal Cross Border Trade (ICBT), and ICT in the Common Market for Eastern and Southern Africa (COMESA) region. The study showed that ICBT is predominant in Africa, especially in the COMESA region and had exerted an adverse effect on trade and other macroeconomic indicators of COMESA economies and Africa in general. The study further examined the task of developments in ICT in getting in touch with the firms excluded financially and concluded that the likely avenue for the validation of these firms is financial inclusion. Furthermore, evidence from trend analysis revealed a strong correlation between ICT developments and trade within the COMESA economies.

In one of the studies that examined the impact of ICT and internet in businesses, Berisha-Shaqiri (2015) utilized content analysis to examine the opportunities of ICT and internet usage in businesses to attain strategic gains and reached the following conclusions: that there has been transformation in computing and communications in the previous few decades; suggestions that developments in technology and the use of information technology will go on; our lives and the way people do business have been distorted by transformation in ICT; improvement in companies capacity to reach more customers, introduction of new products, render quick services, and collaborate with suppliers and business partners globally; change from industrial society to information society and industrial economy to knowledge economy.

Furthermore, Thiemann, Fleming and Mueller (2012) in a related study used the technique of gravity model to examine the impact of ICT on international trade in bananas, oranges, tomatoes, fruits in general and vegetables between key exporting and importing countries from 1995 to 2009. The results from the model showed that mobile phone penetration meaningfully promotes trade in oranges, fruits and vegetables by exporting countries. However, its impact is less than that of fixed telephone usage which has an unexpected negative influence on banana imports. In addition, Internet usage exerted a positive impact on trade in imports of tomatoes. Furthermore, there was an inverse relationship between Internet usage for trade in fruit and vegetables in exporting countries.

Another similar study by Kern (2018) investigated the connections between ICT and globalization and the end result of the process of globalization for the retail industry. Based on materials from existing literature, the result showed that the supply chains, business models, marketing strategies, logistics and other important aspects of retail companies are drastically influenced by developments in ICT such as data mining, social media, RFID systems, internet and e-commerce. Consequently, the competition, transparency, complexity and volatility in the retail industry are rising considerably. Furthermore, retail companies can be a beneficiary of opportunities in the domain of ICT. However, it was advocated that ICT should find solutions to the trials and snags that accompany it.

Furthermore, and in another similar study targeting the emerging markets for the period 1995 to 2010, Liu and Nath (2013), employed the Generalized Method of Moments (GMM) and a panel data of 40 emerging market economies (EMEs) and investigated the ICT-international trade nexus. The submissions of the empirical results that are overpowering are that internet subscriptions and internet hosts exerted a positive and significant effect on both export and import shares in EMEs. However, the boosting effect of ICT on trade is a function of the use of ICT but not a function of ICT infrastructure or ICT capability. In addition, the results imply that trade in EMEs could be enhanced in a positive manner through policies that encourage the use of ICT.

Based on the literature reviewed, It is obvious that while an avalanche of empirical studies had been carried out to investigate the relationship between ICT and trade, the results have been mixed and inconclusive. (see Mattes, Meinen and Pavel, 2012; Park and Koo, 1995; Nordas and Piermartini, 2004; Limao and Venables, 2001; Francois and Machim, 2007; Fink, Matoro and Neagu, 2002; Kern, 2018; Liu and Nath, 2013; Lapukeni, 2015; Swenson, 2004; Choi, 2010; Albuquerque,

Loayza and Seven, 2005; Ahmad et al., 2011; Rauch and Trindade, 2002; Freund and Weinhold, 2002, 2004; Clarke and Wallsten, 2006; Thiemann et al., 2012; Kurihara and Fukushima, 2013 and Tang, 2006). The inconclusive results are based on the unavailability of the fast technological and market convergence of the global ICT industry and hence new empirical studies will continue to evolve in Nigeria, like other nations of the world (The Ministerial Committee on ICT Policy Harmonization, 2012, p. 8). Investigations on the nexus between ICT and Trade in Nigeria is absent to the best of our knowledge, has received no attention and calls for an investigation. These bestow the justification for this study.

2.2 Theoretical Framework

There are various theories that are utilized for ICT research that has thrived in the literature for two decades now. These are the Theory of Reasoned Actions (TRA), Theory of Planned Behaviour (TPB), Theory of Diffusion of Innovations (DOI), Unified Theory of Acceptance and Use of Technology (UTAUT), Model of the Information Technology Implementation Process (MIIP), Three Layered Model (TLM), Information System Success Model and the Technology Acceptance Model (TAM) (Korpelainen, 2011, p.14). The appropriateness of the model, the number of citations and frequency of citations were the yardstick for situating the model for explaining the role of ICT in promoting trade. Korpelainen (2011), conducted a study from 1999 to 2010, using a sample of 1303 articles published in 122 various prominent Journals of Business and Management with a view to reviewing theories employed for ICT system adoption and implementation and noting the important ones used in business and management research.

Based on 2474 citations, the result revealed that the Theory of Planned Behaviour (TPB) benefited from 331 (13.4 per cent) citations; the Theory of Reasoned Actions (TRA) had 502 (20.3 per cent) citations; Technology Acceptance Model (TAM) was cited 869 (35.1 per cent) times; Diffusion of Innovations (DOI) Model possessed 497 (20.1 per cent) citations; Unified Theory of Acceptance and Use of Technology (UTAUT) relished 109 (4.4 per cent) citations; Model of the ICT Implementation Process had 85 (3.4 per cent) citations; Three Layered Model (TLM) was cited once (0.0 per cent) and Information Systems Success Model enjoyed 81 (3.3 per cent) citations. Based on the finding, TAM was the most cited model. The suggested plausible reasons for the popularity of TAM in ICT research were simplicity and suitability. Besides, they are easy to fathom. Irrespective of the fact that these ICT theories vary in their transmission mechanisms, they are amenable to information system research.

Since MIIP has been employed as a good theoretical framework for ICT adoption and usage investigations, it will underpin this study. The pioneering work of Kwon and Zmud (1987) led to the establishment of this theory. However, Cooper and Zmud (1990) extended it afterwards. The basis for directing and organising research based on innovation, technological diffusion and changes in organizations were proposed by this model. The six stages of initiation, organisational adoption, adaptation, acceptance and adoption, routinization, and diffusion involved in ICT adoption and implementation were first proposed by the theory developed by Kwon and Zmud (1987). MIIP has wide acceptance when compared with most of the theories of information system research enumerated above. Despite its emphasis on the six stages of ICT system adoption and implementation, it also dwells on principal variables such as the environment, the features of the users' community, the organization, the technology being used and the core task (James, 2013, pp.117-118).

3. Methodology

A survey research design was employed for this study. The study utilized both primary and secondary sources of data collection. The primary data was collected through a structured questionnaire administered to members of the public and major stakeholders in the public and private sectors of the economy that constitute the trade and investment sector of the economy with a

view to eliciting their perceptions on the role of ICT in supporting trade. This includes Nigerian Customs Service; Ministry of Foreign Affairs; Ministry of Trade and Investment; Ministry of Science and Technology; Ministry of Communication; Ministry of Power, Works and Housing; Ministry of Transport; parastatal organizations related to trade such as the Nigerian Export Promotion Council (NEPC); Nigerian Export-Import Bank (NEXIM); Federal Inland Revenue Services (FIRS); Manufacturers Association of Nigeria (MAN) and the Nigerian Investment Promotion Commission (NIPC). The secondary data were collected from existing literature on the role of ICT in stimulating trade, trade, regional integration and development, ICT and trade facilitation, ICTs for regional trade and integration, and role of ICT in advancing regional connectivity. Random and purposive sampling techniques were utilized for this study. Sixty respondents were purposively drawn from these twelve stakeholders. In addition, a sample of 40 respondents was randomly drawn from members of the public resulting in an overall sample size of 100. The Statistical Package for Social Sciences (SPSS) was employed for data analysis. The study utilized descriptive statistics for the analysis of collected data.

4. Data Presentation, Analysis and Discussion of Results

Table 1: Demographic Characteristics of Respondents

Variable	Items	Frequency	Percentage (%)
Age	18-28	22.0	22.0
	29-39	41.0	41.0
	40-50	31.0	31.0
	51 and above	6.0	6.0
	Total	100.0	100.0
Gender	Male	65.0	65.0
	Female	35.0	35.0
	Total	100.0	100.0
Marital Status	Never Married	24.0	24.0
	Engaged to be Married	8.0	8.0
	Married	67.0	67.0
	Widowed	1.0	1.0
	Total	100.0	100.0
Education	Primary School	0.0	0.0
	Secondary School	5.0	5.0
	Technical & Vocational Education	4.0	4.0
	University or Higher Education	91.0	91.0
	Total	100.0	100.0

Source: Field Survey, 2019.

The demographic characteristics of the respondents are depicted in Table 1. It showed that out of the sample size of 100, 22 or 22% of them had their place in the age range of 18-28 years, 41 or 41% of them had their place in the age range of 29-39 years, 31 or 31% of them had their place in the age range of 40-50 years, whereas only 6 or 6% of them had their place in the age range of 51 years and above. In terms of their gender, 65 or 65% were male while 35 or 35% were female. With reference to their marital status, 24 or 24% of them were never married, 8 or 8% of them were engaged to be married, 67 or 67% of them were married, whereas 1 or 1% of them were widowed. Looking at their education, 0 or 0% of them had Primary School education, 5 or 5% of them had Secondary School education, 4 or 4% of them had Technical and Vocational education whereas 91 or 91% of them had University or higher education.

Table 2: Distribution of respondents based on the role of ICT in facilitating trade

Opinion	Most Important (X5)	Important (X4)	Neutral (X3)	Less Important (X2)	Least Important (X1)	Sum
Improved market reach	340	92	21	4	0	457
Better internal and external communication	240	188	12	2	0	442
Gateway to information and knowledge	300	132	12	6	0	450
Enhancement in managerial decision making	225	160	27	6	3	421
Enhancement of customer relationships	260	144	30	4	0	438
Increased efficiency	255	132	36	6	1	430
Opportunities of E-commerce	280	140	21	2	1	444
Product development	200	172	39	4	2	417
Market development	255	144	21	6	3	429
Transformation of Business	265	140	21	8	1	435
Business integration	210	176	33	4	1	424
E-mail adoption	235	164	24	6	1	430
Internet Presence	300	116	24	6	0	446

Source: Field Survey, 2019.

The result in table 2 revealed the role of ICT in the area of trade facilitation. As a result, thirteen ICT enhanced strategies for promoting trade were adapted from Kern (2018), Ansoff (1957), Smallbone, Leigh, and North (1995), Yujun, Jinsong, Li, and LiPing (2006), Teo and Pian (2003), Davis and Harveston (2000), Watts, Lope, and Hulme (1998), Howe, Mathieu, and Parker (2000), Anderson (2001), Constantinides (2004), Cheffy, Mayer, Johnston, and Ellis-Chadwick (2003), Ghafoor and Iqbal (2007) and Boag and Dastmalchian (1988) and incorporated into the questionnaire and the respondents were asked to indicate the option that suits their opinion. A 5-point Likert type scale from "1= least important" to "5=most important" was used to measure how important certain roles mentioned in the questionnaire were.

Since the mean of a five points rating scale is 3.00, it was the yardstick for taking a decision on each opinion. All opinions in the questionnaire were rated above a mean score of 3.00 and 60%. The true limits of real numbers were the basis for taking a decision on each opinion. In view of the fact that the average of a five points rating scale corresponds with the agreed or possessed opinion, the lower limit of 3.00 point which is 2.50 was used to ascertain whether respondents agreed based on the various rankings that the item was a role of ICT in stimulating trade in Nigeria. An opinion with a

mean rating of 2.50 and above was regarded as agreed or possessed. However, opinions with a mean rating of less than 2.50 were regarded as not agreed or not possessed.

The result revealed that the role of ICT in stimulating trade in the study area was improved market reach with a mean score of 4.57, better internal and external communication with a mean score of 4.42, gateway to information and knowledge with a mean score of 4.50, enhancement in managerial decision making with a mean score of 4.21, enhancement of customer relationships with a mean score of 4.38, increased efficiency with a mean score of 4.30, opportunities of e-commerce with a mean score of 4.44, product development with a mean score of 4.17, market development with a mean score of 4.29, transformation of business with a mean score of 4.35, business integration with a mean score of 4.24, e-mail adoption with a mean score of 4.30, and internet presence with a mean score of 4.46 respectively. The result showed that improved market reach was the greatest role of ICT in trade facilitation in Nigeria. It had the highest frequency of 457 with a mean score of 4.57, this was followed by gateway to information and knowledge with a mean score of 4.50, then internet presence with a mean score of 4.46 and opportunities of e-commerce with a mean score of 4.44 respectively. However, product development with a frequency and mean score of 417 and 4.17 respectively were the least role of ICT in promoting trade in Nigeria.

Table 3: Consensus Opinions of respondents based on the role of ICT in facilitating trade

Opinion	Sum	Mean	Interpretation (consensus opinion)
Improved market reach	457	4.57	Agree
Better internal and external communication	442	4.42	Agree
Gateway to information and knowledge	450	4.50	Agree
Enhancement in managerial decision making	421	4.21	Agree
Enhancement of customer relationships	438	4.38	Agree
Increased efficiency	430	4.30	Agree
Opportunities for E-commerce	444	4.44	Agree
Product development	417	4.17	Agree
Market development	429	4.29	Agree
Transformation of Business	435	4.35	Agree
Business integration	424	4.24	Agree
E-mail adoption	430	4.30	Agree
Internet Presence	446	4.46	Agree

Source: Field Survey, 2019.

The result in Table 3 showed that all the respondents agreed that all the items were roles of ICT in promoting trade in Nigeria.

5. Conclusion and Recommendations

There is no gainsaying it that an ICT revolution is a sine qua non for building a sustainable national economy. Based on the results of this study, ICT has proved to be a catalyst for global competitiveness and promotion of trade in Nigeria. In addition, if adequately endorsed, the adoption and implementation of ICT can be a veritable tool for the attainment of the eighth and ninth pillars of the SDGs in particular and the overall pillars in general. There was evidence of a consensus opinion among respondents that ICT has fostered trade in Nigeria through improved market reach, better internal and external communication, gateway to information and knowledge, enhancement in managerial decision making, enhancement of customer relationships, increased efficiency, opportunities of e-commerce, product development, market development, transformation of business, business integration, e-mail adoption, and internet presence. In addition, the study revealed

that the ultimate role of ICT in encouraging trade in Nigeria was through improved market reach. However, the results showed that the least role of ICT in stimulating trade in Nigeria was product development. Based on these results, the ensuing recommendations were suggested:

- a. There is a need for more investments in ICT infrastructures and sponsorship of ICT educational programmes with a view to enhancing ICT skills and knowledge for the stimulation of trade.
- b. The government should initiate specific ICT policies for fostering efficient and effective trade and investment sub-sector.
- c. There is a need to increase the e-commerce potentials of the rural markets through more investments in telecom infrastructures, particularly the provision of internet access to remote rural areas.
- d. The government should waive tax and import duties for telecom investors and operators to encourage them to enter the Nigerian telecom market.
- e. The government should address the insufficient supply of electricity for the implementation of various initiatives by it and the private sector for the promotion of ICT.
- f. The provision of an enabling environment for the fast extension of telecommunication services and other ICT investments in the country.
- g. The government should initiate appropriate policies, legal, regulatory and institutional frameworks for the protection of e-commerce.
- h. There is a need for more R&D in ICT.
- i. Appropriate legislation should be passed by the government for the protection of ICT infrastructures and checking cyber security.
- j. Encourage nationwide use of e-services for all population groups including in remote and underserved groups for the promotion of trade (Enugu State Government, 2013, p. 10).

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