

The Impact of Innovations and Technology on International Market Growth: Evidence from Developing Nation – Nigeria

Udegbe, Scholastica Ebarefimia
Department of Marketing,
Lagos State University, Ojo, Lagos,
Nigeria
scholasticudegbe@yahoo.co.uk

Abstract

In today's global market, business are faced with intensive competition and challenges, and research have shown that through proper usage of current technologies and innovations some challenges of sustainable and human development can be addressed,, while also providing added value to firm. Hence this study investigates the impact of technology and innovations on international market growth , with evidence from developing nation – Nigeria . A survey research design was adopted and research was based on convenience sampling method of 150 Nigerian firms involved in international marketing . Data are obtained based on convenience sample of 5 respondents from the marketing department of each of the 150 firms, making a sum total of 750 respondents . 496 useable questionnaires were returned. The data collected were analyzed using descriptive statistics , percentage, and t- test . Validity and reliability test indicated that all variables were valid and reliable. The findings revealed that majority of the respondents scored the issues raised in the questionnaire positively, but at different varied levels. Results indicate that firms that are innovative and employ current technology will benefit more in the international market , and thus enjoy increased capacity to develop international network capabilities. Use of technology and innovations enhances international information and international market growth directly or indirectly . Overall, evidence have shown that technology and innovations help in facilitating international marketing through telecommunications , transportation , globalization of production, advertisement , globalization of markets , e – commerce ,and technology transfer . All these leads to improved performance and international market growth of the marketing firms surveyed. Feedback from the research will assist to expand knowledge as to the usefulness of technology and innovation in enhancing international market growth .

Keywords :- Technology , Innovation, International market , Growth , Nigeria , Developing nation.

Introduction

Technology and innovation has completely altered the way in which the world operates. . Technological advances and innovation bring huge opportunities as well as challenges for business , be it national or international business . However , most organization try as much as possible to attach high priority to technology and innovations that will not slow down its growth , especially in the international market . However, there is limited understanding of how technology and innovation drives international market growth in developing nation like Nigeria . Thus , the present study examines the impact of technology and innovation on international market growth with evidence from developing nation – Nigeria . Specifically evidence have shown that technology and innovations help in facilitating international marketing through telecommunications , transportation , globalization of production, advertisement , globalization of markets , e – commerce ,and technology transfer (Smriti Chand

2016 , Leek et al., 2003, Vlosky and Smith, 1993, Wilson and Vlosky, 1998 , Pires and Aisbett, 2003, Reunis et al., 2005, Wu et al., 2003 Claycomb et al., 2004, Deeter-Schmelz, 2002 , , Audrey and Jaraji 2016).

Studies have also shown that technology and innovations are closely linked to product development and growth in business. However , most developing economies lack adequate infrastructure that will support modern technologies and innovations . Studies have shown that lack of adequate reliable infrastructure and irregular power supplies is one of the biggest disincentive to innovation in Nigeria. This has also resulted to low utilization of technology in production capacity and lack of rapid economic growth.

However , research have shown that technology and innovations has been a source of economic and business growth for many countries of the world because it assist firms to move along with the changing needs of customers , and also help in satisfying the demand in the market Hence, the need for this study, bearing in mind that technology and innovations bring huge opportunities , and most especially aid international market growth in most developed nations , regardless of the market turbulence and competition, in which the business operate . Hence, it is worth assessing whether technology and innovation is beneficial in any way to international market growth of firms in developing nation like Nigeria .

The paper starts with a critical look at the current literature on usage and benefits of technology and innovations in business and goes on to formulate hypotheses based on key constructs of finding impact of technology and innovation on international market growth , with evidence from developing nation – Nigeria .

The major objective of this research is to provide knowledge regarding the level of effectiveness and benefits of technology and innovation on firms that engage in international marketing in Nigeria , and its significance to international market growth . The following hypothesis slated in the null form were formulated and tested in order to achieve the objectives of the study:

H1₀ : Firm is not inclined to innovation and technology utilization in international marketing operations.

H2₀ : The greater firms inclination to innovation and technology utilization in business operations , , the lower the capacity to develop international network capabilities .

H3₀ : The greater firms inclination to innovation and technology utilization in business operations , the lower the enhancement of international information and international market growth.

H4₀ : The greater firms inclination to innovation and technology utilization in business operations , . the lower the enhancement of the firm's ability to generate enhanced international market growth through telecommunications and advertisement.

H5₀ : The greater firms inclination to innovation and technology utilization in business operations , . the lower the enhancement of the firm's ability to generate enhanced international market growth through transportation , and technology transfer.

H6₀ : The greater firms inclination to innovation and technology utilization in business operations , . the lower the enhancement of the firm's ability to generate enhanced international market growth through globalization of production and globalization of markets.

H7₀ : The greater firms inclination to innovation and technology utilization in business operations , . the lower the enhancement of the firm's ability to generate enhanced international market growth through e – commerce.

H8o: The greater firms inclination to innovation and technology utilization in business operations, the lower the firms international market growth and business performance. The hypotheses proposed in this paper integrate theories and constructs from extant literature on technology and innovations (Smriti Chand 2016, Leek et al., 2003, Vlosky and Smith, 1993, Wilson and Vlosky, 1998, Pires and Aisbett, 2003, Reunis et al., 2005, Wu et al., 2003, Claycomb et al., 2004, Deeter-Schmelz, 2002, Audrey and Jaraji 2016).

This study will not only find out the impact of technology and innovation on international market growth, with evidence from firms involved in international marketing in Nigeria but also add to the previous literature.

Literature Review

The success of any organization can be traced or linked with the level of success in changing business attitudes about technology and Innovation. An innovation is defined as an idea or object that is perceived as new by an individual or an agency (Rogers, 1995). "The perceived newness of the idea from the individual's point of view determines his or her reaction to it. If the idea seems new to the individual, it is an innovation (Robertson and Tu, 2001). An innovation consists of certain technical knowledge about how things can be done better than existing state of the art. Firm innovation capability is important for several reasons. Innovation present opportunities for firms in terms of growth and expansions into new areas as well as allows firms to gain competitive advantage. Innovation by itself is defined as the generation, acceptance, and implementation of new ideas, processes, products or better services. The innovation process includes the acquisition, dissemination and use of new knowledge (Canlan-tone et al, 2002) and successful implementation of creative ideas within an organization. While as posit by Audrey and Jaraji 2016, technology includes the use of materials, tools, techniques and sources of power to make life bearable or more pleasant and work more productive. Technology focuses on making things happen. Technology (from two Greek words: techno and logos means the ability of humans to create things using hands and/or machines. It is the application of knowledge to the practical aims of human life or to changing and manipulating the human environment. In the past, countries have submitted to Technology and Innovation (Technovation), and this makes global changes around the world. Countries that lead from the technology and business Innovation help other countries that are less in technology to learn from them and hence it reaches many area of the world.

Technology and innovation is one of the central and most significant elements related to effective production and operations management in an organization. It can be defined as a body of knowledge used to create tools, develop skills, extract or collect materials, and produces goods to satisfy needs. Technology increases the prospect for conducting business in more efficient and competitive ways that are methodically different from the past. Every organization uses different form of technology for their business which has a basic and critical effect on the nature, design, structure and work of an organization. In an organization, departments and division are developed around the equipment's used, whether it is for production, communication, information or control. The scope of technology that an organization can adopt or employ is vast. Technovation's success has helped in changing world's attitudes about technology and Innovation. Technovation have been able to come up with a creativity idea, conduct user research, create a business plan, and build the world of innovation. Technology and innovation in business has occupied the attention of researchers in recent years and specifically evidence have shown that technology and innovations help in facilitating international marketing through telecommunications, transportation, globalization of production, advertisement, globalization of markets, e-commerce, and technology transfer, (

Leek et al., 2003, Vlosky and Smith, 1993, Wilson and Vlosky, 1998 , Pires and Aisbett, 2003, Reunis et al., 2005, Wu et al., 2003, Claycomb et al., 2004, Deeter-Schmelz, 2002 , Audrey and Jaraji 2016 , , Shu, & Strassmann, 2005 , Terziovski. 2010,).

Audrey and Jaraji ((2016) posit that, technological change, particularly in developing countries, is not only about innovating at the frontier, but also about adapting existing products and processes to achieve higher levels of productivity as applicable to their local contexts . In this process, the ability of local firms and enterprises to access technological know-how is fundamental to shaping their ability to provide products and services, both of the kind that are essential to improve living standards, and that could also promote growth and competitiveness .

Technological development and innovations provides new possibilities for developing or improving market activities as well as products . Technology make it possible for users that are geographically dispersed to share data bases and messages to be copied and delivered instantly to a vast number of receivers irrespective of geographical location (Claycomb et al., 2004, Deeter-Schmelz, 2002, Reunis et al., 2005, Deeter-Schmelz, 2002, Pires and Aisbett, 2003). Through technological innovations , the social interaction business can be discussed online . Likewise , number of meetings, or need for meetings will decrease, as the use of technology handles a great deal of information exchanges (Archer and Yuan, 2000, Borders et al., 2001 , Bloom et al , 2009 , Egan et al., 2003, Mukhopadhyay and Kekre, 2002, Ovalle and Marquez, 2003, Prasad et al., 2001 , Claycomb et al., 2004, Deeter-Schmelz, 2002, Reunis et al., 2005,).

Technology and innovation serves as a crucial driver of rising prosperity and improved national competitiveness for firms in the global market (Audrey and Jaraji ,2016) Technology has helped in connecting local technological needs to international technological opportunities in most developing countries., and thus aiding international market growth . The use of technology have help improve lives and also promote growth and development in the international market .

Technology and innovation has impact on the organization as well on the consumer. For the organization ,technology has impacted the ability to collect and organize marketing data, reaching out to consumers, and assist in developing different types and formats of advertising. Through technology, organizations also have more data, more marketing formats, and more online places to communicate with consumers (i.e. social networks, blogs, search engines, YouTube videos, etc.) . while for the consumer , marketing has become increasingly integrated into everyday life. From Face book advertising to Google paid search results, the average consumer has an increasingly personalized and data-driven exposure to 'relevant' ad materials. However , for the purpose of this study , international market growth will be measured based on the level of trade in goods and services , current account balance , sales growth rate , export by business size , import by business size , terms of trade , annual growth rate , economic growth rate , aggregate demand , market size , market opportunity and market profitability .

Based on extant literature, as firms continue to increase their productivity, efficiency and effectiveness of business operations , communication , and thus engage in international marketing , the business will continue to rely on innovation and technology for success (Leek et al., 2003, Vlosky and Smith, 1993, Wilson and Vlosky, 1998 , Leek et al., 2003, Pires and Aisbett, 2003, Reunis et al., 2005, Wu et al., 2003 , Claycomb et al., 2004, Deeter-Schmelz, 2002 , Audrey and Jaraji 2016 ,).

Research Methods

The study is a survey that used both primary and secondary data. Primary data were obtained with the aid of standardized instrument (questionnaires) while the secondary data were obtained from extant literature. A convenience sample of 150 marketing firms involved in international marketing operating in Nigeria were taken. Data are obtained based on convenience sample of 5 respondents from the marketing department of each of the 150 firms. Questionnaires with instructions were hand-delivered to respondents. Confidentiality was assured and incentive for participating in the research by making the report of the research available to the respondents if they so desire was promised. Sum total of 750 questionnaire were administered to the respondents from the selected 150 manufacturing / service firms in Nigeria. 523 completed questionnaires were returned , and 496 copies were found usable for the present study, resulting in an effective response rate of 66%. The data was analyzed using descriptive statistics. The research instrument showed high reliability and validity. The Cronbach alpha reliability coefficient for technology and innovation variables (0.741) and international market growth measures (0.711) exceed the value of 0.70 (suggesting adequate reliability, Cronbach (1947). The opinions of scholars of management of marketing confirmed the content validity of the measures used, while the pilot study result confirmed their predictive validity.

The findings from the research were presented below.

Findings and Discussions

In order to accomplish the purpose of the research study, the findings of the responses to the different issues are analyzed below .

Table I shows the descriptive statistics of the extent of impact of utilization of innovations and technology on international market growth . From the mean values in Table 1, it can be seen that all the variables (A1 – A14) witnessed encouraging degree of utilization of innovations and technology in their international marketing operations , with “company is involve in international marketing ” (A1) having the highest extent with mean value of 4.96 . Followed by (A14) “ Innovation and technology utilization in business operations enhances international market growth “ , with mean value of 4. 93 , receive second highest emphasis as well. There is a general consensus in extant literature that International marketing can help open up a larger market than a company would have been able to reach . With a larger market comes the potential for more profit and a greater customer base.

Table 1: Descriptive Statistics of the Extent of Effect of Utilization of Innovations and Technology on International Market Growth (N = 496)

| VARIABLE | MEAN | S.D | SKEWNESS | KUROSIS |
|----------|------|------|----------|---------|
| A1 | 4.96 | 0.99 | -0.96 | 1.28 |
| A2 | 4.64 | 1.31 | -0.70 | -0.57 |
| A3 | 4.40 | 1.34 | -0.55 | -0.68 |
| A4 | 4.41 | 1.12 | -0.53 | -0.74 |
| A5 | 4.45 | 1.46 | -0.86 | -0.02 |
| A6 | 4.76 | 0.99 | -0.71 | 0.15 |
| A7 | 4.79 | 0.98 | -0.71 | -0.15 |
| A8 | 4.74 | 1.21 | -0.89 | 0.12 |
| A9 | 4.68 | 1.39 | -1.20 | 0.80 |
| A10 | 4.75 | 0.97 | -0.70 | 0.14 |
| A11 | 4.78 | 1.23 | -0.87 | -0.21 |
| A12 | 4.76 | 0.99 | -0.72 | 0.15 |
| A13 | 4.79 | 1.22 | -0.89 | 0.22 |
| A14 | 4.93 | 0.99 | -0.95 | 1.27 |

SOURCE: Data Collected from Survey Research

International marketing introduces an entirely new population to your products or services and has the potential to substantially increase company's recognition and reach . However , innovation and technology utilization in the business operations enhances international market growth (Archer and Yuan, 2000, Borders et al., 2001, Egan et al., 2003, Mukhopadhyay and Kekre, 2002, Ovalle and Marquez, 2003, Prasad et al., 2001 , Claycomb et al., 2004, Deeter-Schmelz, 2002, Reunis et al., 2005,). Table 1, also shows that (A3) “ innovation and technology utilization increase the capacity to develop international network capabilities “ with mean value of 4.40 receive the least emphasis . This can be explained because most firms in Nigeria do not attach high or optimal priority to sophisticated technology and innovations, and that slows down the company’s growth. In present competitive global economic scenario, organizations who fail to advance technologically are at potential risk of lagging behind competitively as well as in terms of productivity.

Table 2: Descriptive Statistics of the Extent of Effect of Innovation and Technology in Realisation and Actulisation of International Market Growth Performance Objectives (N = 496)

| VARIABLE | MEAN | S.D | SKEWNESS | KUROSIS |
|----------|------|-------|----------|---------|
| B1 | 4.98 | 0.95 | -0.91 | 0.56 |
| B2 | 4.70 | 0.98 | -0.35 | 0.22 |
| B3 | 4.96 | 0.97 | -0.90 | -0.56 |
| B4 | 4.18 | 1.47 | -0.53 | -0.74 |
| B5 | 4.41 | 1.12 | -0.53 | -0.06 |
| B6 | 4.69 | 1.39 | -1.21 | 0.80 |
| B7 | 4.79 | 0.97 | -0.72 | -0.16 |
| B8 | 4.39 | 1.43 | -0.75 | -0.48 |
| B9 | 4.33 | 1.38 | -0.60 | -0.34 |
| B10 | 4.45 | 1.34 | -0.77 | -0.35 |
| B11 | 4.61 | 1.25 | -0.49 | -0.48 |
| B12 | 4.48 | 1.33 | -0.66 | -0.18 |
| B13 | 4.48 | 1.33 | -0.66 | -0.18 |
| B14 | 4.59 | 1.19 | -0.65 | -0.14 |
| B15 | 4.64 | 1.30 | -0.70 | -0.56 |
| B16 | 4.49 | 1.28 | -0.74 | 0.04 |
| B17 | 4.49 | 1.28 | -0.74 | 0.04 |
| B18 | 4.64 | 1.30 | -0.70 | -0.56 |
| B19 | 4.45 | 1.35 | -0.78 | -0.31 |
| B20 | 4.79 | 0.97 | -0.72 | -0.16 |
| B21 | 4.78 | 0.96 | -0.70 | -0.24 |
| B22 | 4.84 | 0.94 | -0.88 | -0.51 |
| B23 | 4.84 | 0.96 | -0.87 | -0.51 |
| B24 | 4.98 | -0.95 | -0.92 | 0.55 |
| B25 | 5.05 | 0.92 | -0.95 | 0.59 |

SOURCE: Data Collected from Survey Research

Table 2 shows the descriptive statistics of the extent of innovation and technology in realization and actualization of international market growth performance objectives . The most achieved result is B25 – “Innovation and technology help in the achievement of increased firms international market growth and business performance “ with mean value of 5.05. And followed by both B1 “ Innovation and technology help in import content and export in international marketing” and B24 “ Innovation and technology help in the achievement of

increase market profitability in the international market, both having mean value of 4.98, and all the above are in accordance with extant literature (Archer and Yuan, 2000, Borders et al., 2001, Egan et al., 2003, Mukhopadhyay and Kekre, 2002, Ovalle and Marquez, 2003, Prasad et al., 2001, Claycomb et al., 2004, Deeter-Schmelz, 2002, Berger 2003). While, the least achieved objective is B4 "Innovation and technology help in the contribution to GNP / GDP growth" with mean value of 4.18. This can also be explained because most firms in Nigeria do not attach high or optimal priority to sophisticated technology and innovations, and that slows down the company's growth

Test of Research Hypotheses

Research Hypothesis One

HYPOTHESIS Ho: Stated that: Firm is not inclined to innovation and technology utilization in international marketing operations.

With the generation from the mean value in table 1 which shows the full result of the descriptive statistics of the extent of effect of utilization of innovations and technology on international market growth by surveyed firms in Nigeria, the first hypothesis in the study was put to test, and from the mean column in table I it can be seen that all the variable (A1 –A14) witnessed encouraging degree between 4.40 – 4.96 respectively, thus, experiencing average support for the researchable questions. This suggests that innovation and technology enhances to a reasonable extent the international market growth of the surveyed firms. Hence the null hypothesis is rejected and the alternative hypothesis is hereby accepted, that the surveyed marketing firms in Nigeria are inclined to innovation and technology utilization in international marketing operations.

Research Hypothesis Two

HYPOTHESIS Ho: The greater firms inclination to innovation and technology utilization in business operations, the lower the capacity to develop international network capabilities.

With the generation from the mean value in table 1, the second hypothesis in the study was put to test. From the mean column in table I, it can be seen that A3 = "Innovation and technology utilization increase the capacity to develop international network capabilities", and A5: "Innovation and technology assist firm to generate other internal capabilities within the firm, which in turn might have a positive impact on the international market growth of the firm.", witnessed encouraging degree of support of A3 = 4.40 and A5=4.45. This suggests that to some extent, innovation and technology utilization in business operations influence the capacity to develop international network capabilities. Hence the null hypothesis is rejected and the alternative hypothesis that the greater firms inclination to innovation and technology utilization in business operations, the higher the capacity to develop international network capabilities is hereby accepted. Likewise, in the t-test analysis (not recorded here), tested at 5 percent level of significance, the t-score value of A3 = 3.873 and A5 = 4.624, exceeds the t – table value of 1.96, therefore the null hypothesis was rejected and the alternative hypothesis accepted.

Research Hypothesis Three

HYPOTHESIS Ho: The greater firms inclination to innovation and technology utilization in business operations, the lower the enhancement of international information and international market growth.

From the mean column in table I it can be seen that A4 "Innovation and technology enhance international information and international market growth" witnessed encouraging degree of 4.41, thus, experiencing average support for the researchable questions. This suggests that there is relationship between innovation, technology and enhancement of interna-

tional information and international market growth . The null hypothesis is rejected and the alternative hypothesis that there is relationship between innovation , technology and the enhancement of international information and international market growth is accepted. Likewise, in the t - test analysis (not recorded here) , when tested at 5 percent level of significance, the t score values was 4.412. Since the t score value exceed the t - table value of 1.96 , therefore the null hypothesis was rejected and the alternative hypothesis was accepted. Hence, the alternative hypothesis that the greater firms inclination to innovation and technology utilization in business operations , the higher the enhancement of international information and international market growth is hereby accepted .

Research Hypothesis Four

HYPOTHESIS Ho: The greater firms inclination to innovation and technology utilization in business operations , . the lower the enhancement of the firm's ability to generate enhanced international market growth through telecommunications and advertisement .

From the mean column in table I it can be seen that A7= Innovation and technology utilization enhance telecommunications , and A10 = Innovation and technology utilization enhances advertisement globally , witnessed encouraging degree of A7 = 4.79 and A10=4.75 respectively . thus, experiencing average support for the researchable questions. This suggest that there is relationship between innovation , technology and enhancement of telecommunications and advertisement . Hence the null hypothesis is rejected and the alternative hypothesis is hereby accepted. Likewise, in the t - test analysis (not recorded here) , when tested at 5 percent level of significance, the t score values was A 7= 4.473 , and A10 = 4.822. Since the t score value exceed the t - table value of 1.96 , therefore the null hypothesis is rejected and the alternative hypothesis is hereby accepted i.e. the greater firms inclination to innovation and technology utilization in business operations , . the higher the enhancement of the firm's ability to generate enhanced international market growth through telecommunications and advertisement .

Research Hypothesis Five

HYPOTHESIS Ho: The greater firms inclination to innovation and technology utilization in business operations , . the lower the enhancement of the firm's ability to generate enhanced international market growth through transportation , and technology transfer .

From the mean column in table I , it can be seen that A8 " Innovation and technology utilization enhance transportation" and A13 "Innovation and technology utilization enhances technology transfer " witnessed encouraging degree of A8 = 4.74 and A13 =4.79 respectively , thus, experiencing encouraging support for the researchable questions . Likewise, in the t - test analysis (not recorded here) when tested at 5 percent level of significance, the t score values was A8= 4.529 , and A13 = 4.619. Since the t score value exceed the t - table value of 1.96 , therefore the null hypothesis is rejected and the alternative hypothesis that the greater firms inclination to innovation and technology utilization in business operations , . the higher the enhancement of the firm's ability to generate enhanced international market growth through transportation , and technology transfer is hereby accepted .

Research Hypothesis Six

HYPOTHESIS Ho: The greater firms inclination to innovation and technology utilization in business operations , . the lower the enhancement of the firm's ability to generate enhanced international market growth through globalization of production and globalization of markets .

From the mean column in table I , it can be seen that A9 " Innovation and technology utilization enhance globalization of production " , and A11 "Innovation and technology utiliza-

tion enhances globalization of markets”, witnessed encouraging degree of $A9 = 4.68$ and $A11 = 4.78$ respectively, thus, experiencing encouraging support for the researchable questions.. Likewise, in the t - test analysis (not recorded here) when tested at 5 percent level of significance, the t score values was $A9 = 4.536$, and $A11 = 4.728$. Since the t score values exceed the t - table value of 1.96, therefore the null hypothesis is rejected and the alternative hypothesis that the greater firms inclination to innovation and technology utilization in business operations, the higher the enhancement of the firm’s ability to generate enhanced international market growth through globalization of production and globalization of markets is hereby accepted.

Research Hypothesis Seven

HYPOTHESIS Ho: The greater firms inclination to innovation and technology utilization in business operations, the lower the enhancement of the firm’s ability to generate enhanced international market growth through e – commerce ..

From the mean column in table I, it can be seen that $A12$ “ Innovation and technology utilization enhances e – commerce “, witnessed encouraging degree of mean value 4.76, thus, experiencing encouraging support for the researchable question. Likewise, in the t - test analysis (not recorded here), when tested at 5 percent level of significance, the t score values was $A12 = 5.181$. Since the t score values exceed the t - table value of 1.96, therefore the null hypothesis is rejected and the alternative hypothesis that the greater firms inclination to innovation and technology utilization in business operations, the higher the enhancement of the firm’s ability to generate enhanced international market growth through e – commerce is hereby accepted.

Research Hypothesis Eight

HYPOTHESIS Ho: The eight hypothesis states that: The greater firms inclination to innovation and technology utilization in business operations, the lower the firms international market growth and business performance.

With the generation from the mean value in table II, $B1 - B25$ shows the result of the descriptive statistics related to performance measure, and the most achieved performance measure is $B25$ “ Innovation and technology help in the achievement of increased firms international market growth and business performance “ with mean value of 5.05. This suggests that to a reasonable extent, innovations and technology enhance international market growth and business performance. Likewise, in the t-test analysis (not recorded here), when tested at 5 percent level of significance, the t-score value = 6.213 exceeds the t- table value of 1.96, therefore the null hypothesis was rejected and the alternative hypothesis that Innovation and technology help in the achievement of increased firms international market growth and business performance is hereby accepted.

Hence it can be concluded that innovation and technology impact international market growth in developing nations, evidence from surveyed firms in Nigeria.

From the demographic statistics (table not shown) of respondents from the survey, it was observed that the majority of respondents were top management staff (90%) and middle management staff (10%). With regard to the years of operation, the majority of the participating firms had been operating for between 11 to 20 years. Approximately 79% of the firms were located in city / town area. It was observed that a significant number of the respondents 99.6% are educated with minimum certificate of HND / B.Sc., and that they all have significant interest in the study, thus providing their personal contact such as email, address, phone numbers among many others. The respondents also belong mostly within the age gap of 40 to 59 years, and occupy management positions in their respective firms.

Conclusion and Suggestion for Further Research

The research has empirically investigated the impact of innovation and technology on international market growth with evidence from developing nation – Nigeria. It has been found that innovation and technology significantly influenced the enhancement and achievement of international market growth of the surveyed firms in Nigeria, and innovations and technology have provided the avenues for international marketing firms to enhance their network capabilities, telecommunication, transportation, production, advertisement, globalization of market, e-commerce, technology transfer, international market growth and business performance. This research has also shown, from general consensus in extant literature that there is positive relationship between the level or extent of innovation, and effective utilization of technology, and the achievement of international market growth (Leek et al., 2003, Blili and Raymond, 1993, Vlosky and Smith, 1993, Wilson and Vlosky, 1998, Pires and Aisbett, 2003, Reunis et al., 2005, Berger 2003, Wu et al., 2003, Claycomb et al., 2004, Deeter-Schmelz, 2002, Audrey and Jaraji 2016, Bofondi and Lotti 2005, Borders et al 2001, Brynjolfsson, and Hitt . 2000, Shu, & Strassmann, (2005), Terziovski.(2010).

The study confined itself to international marketing firms in Nigeria. For effective generalization, this research therefore should be replicated in other developing economies and the results be compared so as to establish whether there is consistency in the results. Thus the findings may not be a thorough reflection of the developing nations as a whole. .

These results may be useful to both academics and business practitioners with interest in international marketing .

References

- Archer, N. & Yuan, Y. F. (2000). Managing business-to-business relationships throughout the e-commerce procurement life cycle. *Internet Research-Electronic Networking Applications and Policy* ,10, 385- 395.
- Audrey Paul Ndesaulwa, Jaraji Kikula. The impact of technology and innovation (Technovation) in developing countries: A review of empirical evidence. *Journal of Business and Management Sciences*. 4 (1) 20. <http://pubs.sciepub.com/jbms/4/1/2>
- Berger A. N. (2003) . The economic effects of technological progress: evidence from the banking industry , *Journal of Money, Credit, Banking*, 35 (2) 141-176.
- Blili, S. and Raymond L.(1993) . Information technology: Threats and opportunities for small and medium-sized enterprises . *International Journal of Information Management.*, 13 (6) 439-448
- Bloom, N., L. Garicano, R. Sadun and J. Van Reenen (2009). The distinct effects of information technology and communication technology on firm organization, NBER working paper 14975.
- Bofondi M. and . Lotti F. (2005) . Innovation in the retail banking industry: the diffusion of credit scoring . *Review of Industrial Organization*, 28 , 343-358
- Borders, A. L., Johnston, W. J. & Rigdon, E. E. (2001) . Beyond the dyad: Electronic commerce and network perspectives in industrial marketing management . *Industrial Marketing Management* . 30, 199-205.
- Brynjolfsson, E. and Hitt M. (2000) . Beyond computation: information technology, organizational transformation and business performance . *Journal of Economic Perspectives*, 14 (4) 23-48
- Calantone, R.J., Cavusgu, S.T Zhao, Y. (2002) . Learning orientation, firm innovation capability and firm performance . *Industrial Marketing Management* . 31, 515-524

- Casolaro I, G. Gobbi G. (2007) . Information technology and productivity changes in the banking industry , *Economic Notes*, 36 , 43-76
- Cronbach, L.T. (1947) . Test reliability: its meaning and determination . *Psychometric*, 12(1); Egan, T., Clancy, S. & O'toole, T. (2003) . The integration of e-commerce tools into the business process of SMEs. *Irish Journal of Management*, 24, 139.
- Leek, S., Turnbull, P. W. & Naude, P. (2003) . How is information technology affecting business relationships? Results from a UK survey. *Industrial Marketing Management*, 32, 119-126.
- Mukhopadhyay, T., Kekre, S. & Kalathur, S. (1995) . Business value of information technology: A study of electronic data interchange. *MIS Quarterly*
- Ovalle, O. R. & Marquez, A. C. (2003) . The effectiveness of using e-collaboration tool in the supply chain: an assessment study with system dynamics. *Journal of Purchasing & Supply Management* . 9, 151-163.
- Pires, G. D. & Aisbett, J. (2003) . The relationship between technology adoption and strategy in business-to-business markets - The case of e-commerce. *Industrial Marketing Management* . 32, 291-300.
- Prasad, V. K., Ramamurthy, K. & Naidu, G. M. (2001) . The influence of internet-marketing integration on marketing competencies and export performance. *Journal of International Marketing* . 9, 82-110.
- Reunis, M. R. B., Van Raaij, E. M. & Santema, S. C. (2005) . Actor-to-actor dissemination of electronic procurement (EP) adoption: an exploration of influencing factors. *Journal of Purchasing & Supply Management* . 10, 201-210.
- Robertson, P. C., Tu, T.F., (2001) . Firm strategy innovation and consumer demand: a market process approach . *Managerial and Decision Economics*. 22, 183-199
- Shu, W. & Strassmann, P. A. (2005) . Does information technology provide banks with profit?, *Information and Management* . 42 (5), 781-787 .
- Terziovski. (2010) . Innovation and its performance implication in small and medium enterprises in manufacturing sector: A resource based view. *Strategic Management Journal* . 31(8), 892 - 902.
- Vlosky, R. P. & Smith, P. M. (1993) . Enhancing business relationships via electronic information technologies: Wood products sellers and home center buyers. *Forest Product Journal* . 43, 11.
- Wilson, D. T. & Vlosky, R. P. (1998) . Inter organizational information system technology and buyer-seller relationship. *Journal of business and industrial marketing*. 13, 215-234.
- Wu, F., Mahajan, V. & Balasubramanian, S. (2003) . An analysis of e-business adoption and its impact on business performance. *Journal of the Academy of Marketing Science* . 31, 425-447.

APPENDIX

KEY TO RESEARCH VARIABLES

Innovation and Technology Variables

A1 = company is involve in international marketing ; A2 = company is inclined to innovation and technology utilization ; A3 = Innovation and technology utilization increase the capacity to develop international network capabilities ; A4 : Innovation and technology enhance international information and international market growth .A5 : Innovation and technology assist firm to generate other internal capabilities within the firm, which in turn might have a positive impact on the international market growth of the firm. . A6 =Innovation and technology utilization_ **facilitate s international marketing** A7= Innovation and technology utilization enhance telecommunications , A8 = Innovation and technology utilization enhance transportation , A9 = Innovation and technology utilization enhance globalization of production , A10 = Innovation and technology utilization enhances advertisement globally . A11 = Innovation and technology utilization enhances globalization of markets , A12 = Innovation and technology utilization enhances e – commerce A13 = Innovation and technology utilization enhances technology transfer A14 = Innovation and technology utilization in business operations enhances international market growth

Performance Measurement

International market growth performance objectives

B1 =Innovation and technology help in import content and export in international marketing . B2 =Innovation and technology help in the achievement of meeting the changing customer / client needs / wants ,B3 =Innovation and technology help in the achievement of meeting improved customers / client services . B4=Innovation and technology help in the contribution to GNP / GDP growth . B5 =Innovation and technology help in the achievement of improved efficiency . B6 =Innovation and technology help in the achievement of trade in goods and services . B7 =Innovation and technology help in the achievement of increase sales growth . B8 =Innovation and technology help in the achievement of increase exports by business size . B9 =Innovation and technology help in the achievement of increase import by business size . B10 =Innovation and technology help in the achievement of meeting the terms of trade . B11 =Innovation and technology help increase in capacity of production ,B12 =Innovation and technology help in the achievement of meeting aggregate demand . B13 =Innovation and technology help in the achievement of increase market size . B14 =Innovation and technology help in the achievement of increase market opportunity . B15 =Innovation and technology help in the achievement of growth in customer base . B16 =Innovation and technology help in the achievement of increase turnover in business operation . B17 =Innovation and technology help in the achievement of short – term goals. B18 =Innovation and technology help in the achievement of long – term goals . B19 = Innovation and technology help in the achievement of financial management goals ; B20 = Innovation and technology help in the achievement of producing management goals ; B21 = Innovation and technology help in the achievement of market management goals ,B22 =Innovation and technology help in the achievement of increase annual growth rate . B23 =Innovation and technology help in the achievement of increase economic growth rate in the international market . B24 =Innovation and technology help in the achievement of increase market profitability in the international market .. B25 = Innovation and technology help in the achievement of increased firms international market growth and business performance .

BIOGRAPHY OF THE AUTHORS

UDEGBE Scholastica Ebarefimia – lecturer with Lagos state University, Faculty of Management

Sciences, Department of Marketing,

Ph.D International Business, from Lagos State University. Nigeria.

Ph.D Geography and Regional Planning (Agricultural Geography) from Ambrose Alli University,

Nigeria.

M.Sc. Business Administration (Marketing) and B.Sc Business Administration - both from University of Lagos. Nigeria.

Fellow of National Institute of Marketing of Nigeria.

A member of Institute of Strategic Management of Nigeria.

Email: scholasticudegbe@yahoo.co.uk