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THE GROWTH OF E-BUSINESS IN AN EMERGING ECONOMY: THE CASE OF SMALL AND MEDIUM SIZED ENTERPRISES IN NIGERIA

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I hereby declare that I have compiled the thesis/paper independently and all works, important standpoints and data by other authors have been properly referenced and the same paper has not been previously presented for grading.

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ABSTRACT

The main aim of this research is to examine the rising impact of e-business in emerging economies, a case study of Nigerian small and medium sized enterprises (SMEs) and their business growth. The study provides answers to the following research questions; What factors generally promote the adoption of e-business technologies? What factors generally constrain the adoption and implementation of e-business? How, on balance, do e-business technologies contribute or not to SME growth in Nigeria? How and why may findings from this study generalize to e-business and SME growth in other countries than Nigeria? Three null hypothesis are developed. Probability sampling technique was used to sample 288 respondents to test these hypotheses, and data was also collected using a structured questionnaire. Simple descriptive statistical and ordinary least square multiple regression model was used to analyze the above data from the field. Results show that Nigerian SMEs employ e-business technologies mostly to provide product information to customers, in support of finding out what customers needs and want. Online products updates, also, contribute to employment of e-business technologies in Nigeria. The growth of SMEs in Nigeria appears more renowned in terms of communication enhancement, information resource and knowledge sharing, and expansion of market to reach people worldwide, than in terms of e.g. managerial control. The most serious factors that appear to promote e-business technologies are that these enable Nigerian SMEs to reach new customers. Employing these technologies also enable the Nigerian SMEs to improve upon their customer relations and efficiency, and owner/manager support for employees, better than otherwise,. In turn, network quality and lack of awareness of the technologies' customer-perceived benefits were the main constraints. Regression analysis of the three null hypotheses establishes that there is a significant relationship between the application of e-business and the contribution of e-business to SME growth. There is significant relationship between the promoters/enablers of e-business use and the contribution of e-business to SME growth. Finally, there is a significant negative relationship between the constraints to e-business and the contribution of e-business to SME growth. In conclusion, the growth of SMEs in Nigeria on balance greatly benefits from the employment of e-business, and the enables the Nigerian growth SMEs doing so and their environment to thrive. The main implication for further research is to study employment of e-business technologies by growth SMEs in other emerging economies than Nigeria.

INTRODUCTION

In the past 10 years, research has shown that the application of information and communications technology tools, in both big and small firms is globally on the increase. This is also evident in Nigeria (Olayinka, Wynn, Bechkoum 2016; Okundaye et al. 2019). Like in many other developing countries, there is in Nigeria increased use and penetration of the internet and mobile networks (Italy – Mobile Market Statistics and Forecast, 2019). Current and potential customers of both large and small companies in Nigeria are now increasingly not only equipped with desktop computers and laptops, but also with mobile devices such as iPads, smartphones, and tablets. The demand for the exploitation of e-business technology arising from its efficacy in developing countries is continually on the increase also in Nigeria. Although some authors (e.g. Akanbi, 2015) have already explored the importance of electronic business to smaller firms, there still remains an important knowledge gap especially with regards to the specific ways Nigerian small firms (companies which have 50 employees and less) use e-business technologies and in what particular ways these ways may be contribute to research-based knowledge on the growth and development of small and medium entreprises with regards to Nigeria and/or other emerging economies. Also, the study by Akanbi (2015) and most other researches on e-business use by SMEs within Nigeria only focused on how the use of e-business benefit SMEs without recourse to how inhibitors and enablers affect the growth contributions by these e-business use in these small firms.

Like their larger counterparts, the smaller companies in Nigeria (companies with fewer than 50 employees) are no longer oblivious of the impacts of ICT (e.g. computer, electronic mails, etc.) can cause on business growth and development. Like in many countries, also in Nigeria, many smaller companies like micro-enterprises with 10 employees or less now utilize the computer systems with internet access in carrying out their business transactions. There is business software specifically designed for a smaller company that can improve information and knowledge management within that firm, therefore, leading to increased efficiency in business processes hence, better performance of their firm. Communication through the use of electronic mail and the web helps to improve firms' external communication, or may reduce overall business logistics through the reduced cost in transaction, enhancing the speed and dependability in transactions, hence increases the value gained per transaction (Organization for Economic Cooperation and Development; OECD, 2004). This study

will critical evaluate the specific ways e-business application is contribute to the growth of small firms and also help to determine how better the firms can apply e-business to increase output.

The dynamism in ICT now enables small and medium enterprise owners in Nigeria to leverage e-business opportunities as well as overcome challenges involved. The opportunities include that smaller Nigerian companies can now relatively easily access customers near and far which was near impossible in the past. By adopting e-business, this smaller firms can become more competitive. Amongst the challenges involved is that the level of technical competence amongst these smaller companies remains an issue (Alemayehu 2005; Tob-Ogu et al. 2018). With recourse to this challenges, it may be pertinent to identify and map challenges that stand as stronger barriers to SMEs from maximizing the benefits of e-business.

Many studies on the utilization of e-business by SMEs in the emerging economy context focused mostly on the enablers and inhibitors of e-business in a different investigation and the general use/application of ICT by SMEs as another separate study. Akanbi (2015) investigated primarily how the application of e-business affect the performance of SMEs. However, little or no attempt have been made to study these factors simultaneously to understand how the presence of one factor affects another i.e. how the presence of the inhibitors and/or enablers affect application and/or contribution of e-business to SME growth .

With recourse to the foregoing, the following research questions formed the basis of this study:

 i.   What are the factors which promote e-business use?
 ii. What factors constrain the adoption and implementation of e-business by Nigerian SMEs?
 iii. How, on balance, does e-business technologies contribute or not to SME growth in Nigeria?
 iv. How and why may findings from this study generalize to e-business and SME growth in other countries than Nigeria?

To answer the above research question, this study will also develop the following three null hypotheses.

H_{01}: The application of e-business technologies by SMEs does not significantly affect the contribution of e-business to the growth of SMEs

H_{02}: The promoters/enablers of e-business does not significantly affect the contribution of e-business to the growth of SMEs

H$_{03}$: The constraints to e-business technologies does not significantly affect the contribution of e-business to the growth of SMEs

The structure of this thesis is that, after this chapter, the following chapter is a literature review. This section will draw insights from past research works and publications to providing meaning and understanding to the concept, and the context of this study. This will be followed by a presentation of the methodology. This section gives understanding of the samples, and the techniques the samples for the study was chosen, data collection and analytical tools used for the study. The last chapter presents the research results in tables and charts followed by the discussion. In the last section, a summary of the entire work is articulated and conclusion is drawn based on the major findings of the study.

1. LITERATURE REVIEW

This chapter is divided into seven summarized sections. The first section is a general review of the meaning of emerging economy. The second part, at a more specific level of analysis, is a review of empirical findings on use of e-business technology in various sizes of enterprises. This latter part reviews studies that describe the workings of particular emerging economies, on one hand, and studies on the histories and definitions of various kinds or categories of e-business, how business processes and ICT have been found to link to one another empirically, as well as findings particularly on SMEs in the Nigerian context.

The third section of this literature reviews the different kinds or categories of e-business models in more detail. The fourth section discusses SMEs and the growth opportunities and growth challenges in the Nigerian context. The fifth section provides a general theoretical background of business growth in any kind of a firm in any kind of an economy. The sixth and seventh sections make an attempt to both conceptualize and crystallize the theories on which this study builds; that is, the theories that will be operationalized in analyzing the data and drawing findings of this study. The seventh section this ends by showing the emerging framework for the study in the form of a schema.

1.1 A review of empirical findings on use of e-business technology in mature economies

One of the ways to transform an emerging economy into a newly industrialized economy is e-business. By e-business, what it referred to in this context is the use of information and communication technology (internet, mobile phone, etc.) for commercial purposes at the level of individual firms. Block et al. (1996) and Henderson (2001) DEFINE e-business as the buying of goods and/or services over using the internet. According to Asghar, (2011), "e-commerce is the process of trading or exchanging products, services, and information using computer networks including the Internet". Gibbs et al. (2003) further buttresses e-commerce as the use of the Internet to "buy, sell, or support products and services" which involves all categories of business-related transactions, information transfer, relationship and management in business and formation of virtual communities over the internet. In comparison to the definition by Gibbs et al. (2003) to that of Turban et al. (2002), Gibbs

et al.'s definition is much more comprehensive, as it sees e-business from the perspective of relationship management and the creation of online communities.

The history of e-business is as old as the commencement of trading over the Internet (*Ecommerce-Land* 2005). According to Chaffey et al. (2006) and Turban et al. (2008), "the first use of the internet was by the U.S. government as far back as 1960s and was initially used by its agencies and academic researchers and scientists". This spurred the adoption of E-commerce later in 1991 when the Internet became open as a commercial platform and people since then have begun flocking at an increasing rate to participate in the World Wide Web (Turban et al. 2008).

According to Akanbi (2015), e-commerce tools are those tools which enable businesses to link with internal and external data systems more efficiently and more flexibly, to work efficiently with suppliers and partners, and to be more efficient in the satisfaction of the needs of customers. Akanbi further reports that e-business could also offer SMEs the opportunity to take on and compete with larger enterprises.

According to Kalanje (2002), ICT is a very dynamic concept because of its ability to cause advancement in the manner and pattern of trade in the international market. As a result, new opportunities have been created for SMEs. Many SMEs therefore take advantage of the e-business technology to reach more customers across the states and nations of countries and continents. Hence, to increase the efficacy of any business, e-business use is crucial if firms will become more competitive in the market as this will enable them increase their competitive advantage via reduction of transaction cost and enhancing the communication between them and other business and between them and their customers (Alemayehu 2005).

1.2 General theory of business growth to explain e-business growth

Theories are used to predict possible outcomes of events. The case of the application of e-business by Nigeria SMEs can be considered as a growth strategy as the SMEs deploy this strategy so as to improve their fitness in the market. Several authors have proposed theories on business growth. In the various studies reviewed, they tried to point out the conditions for business growth. One of the oldest theories was by Robbert Gibrat (1931). This is called Gibrat's law of proportionate effect. According

to this theory, the growth of a firm depends largely on its original size. In this regards, Ijiri and Simon (1967) corroborated this theory.

Coad (2009) theorized seven determinants of business growth.

i.   age,

ii.   innovation,

iii.   financial performance,

iv.   relative productivity,

v.   firm and industry specific factors,

vi.   macro-economic factors.

According to Greiner's model (1972), age and size of firm are most often considered to be very closely related. The earliest study on the influence of age on growth of firms was done by Evans (1987b). She observed that age negatively influence the growth of firms.

A very popular study by Hay and Kamshad (1994) opine that investing in innovation is a pertinent to business expansion. This theory was supported by Geroski (2006) and Aghion and Howitt (1992). This therefore means that the level of firm innovativeness can impact largely positively on a firm's growth rate. In the context of this study, innovativeness can be referred to the ability of the firms to make maximum use of ICT (e-business tools) in the business operations.

In addition, Coad (2009) theorized that firm growth has a strong positive influence with annual performance. This theory was based on the 'principle of growth of the fitter', in which case, all firms are in constant struggle to take a larger share of the growth opportunity in the market. Hence, only firms which are able to outwit others in performance tend to grow more than others. Coad (2005) established a statistical relationship between sales performance and financial performance of French manufacturing firms. It is also notable that firms can apply e-business in ways that help them better their financial performance hence they grow. This implies that firms who adopt e-business technologies do so in order to improve the sales performances and thus their competitive advantage.

Bottazi *et al.* (2006) observed that a strong positive relationship exists between productivity and growth of firms. On the other hand, low productivity usually suggests exit or closure for a firm (Foster et al. 1998). Other factors discussed under this theory is nature of firm's activity, level of diversification, advertising intensity and degree of intensity. In the context of industry specific factors, Coad (2009) states that firms in technology oriented industries may have more growth rate resulting

from speedy technological progress and apparition of near projects. Furthermore, the level of competition in each industrial sector can also have bearing on the growth of firms. This implies that firms who are triggered by competition to adopt e-business for their firm operations may gain positively in terms of growth.

Finally, the growth of firms was found to be related to certain macroeconomic factors as demonstrated by Higson *et al* (2004) in their study of US firms. Higson *et al*. (2004) deduced from Gibrat law that smaller firms grow relatively faster during booms whereas larger firms will grow relatively better during recession and economic recoveries. Also, Gabe & Kraybil (2002) emphasized the relevance of region when it comes to business growth while Bartelsman *et al* (2005) opine that business in developed countries will have a different growth pattern from those in less developed or developing countries. Interesting enough, the application of e-business is expected to change this trend since it enables firms to increase customer base, and access markets near and far.

In conclusion, it appears that the economic growth both at the economy level, and the firm and company level can be described and explained both in developing (emerging) and developed (material or industrialized) economy. However, non-effort has been made by researchers to specifically bring to the fore the connection between business growth and the application of e-business application in emerging economy like Nigeria. It is, therefore, a major discovery in this research study as it critically analyzes the application of e-business by Small and Medium Enterprises in Nigeria and further ascertain the relationship between their application of e-business in business operation and their growth effects and how the presence and absence of growth and inhibiting factors in e-business affect the growth of business that use e-business in their business operations.

1.3 General challenges of business in an Emerging economy

Generally, emerging economy is described in terms of economic growth which are seen in the areas of industrialization, business and other social and economic activities. Although this concept is being considered as not suitable by economist, notwithstanding, there have been currently no better and generally accepted description to emerging economy (Mardiros & Dicu, 2014).

The first well known definition of emerging market was first put forward by Finance Corporation, a member of the World Bank Group. In this context, emerging market was described as a small to

medium sized developing country with an appreciable level of GDP. In addition, this economy enables foreign investors to buy stocks in their financial market (Boao Forum for Asia, 2009). Over the years, the scope of 'emerging market' have gone beyond the prior definition to encompass virtually all developing countries (Thorpe and Prakash-Mani, 2003). This implies that developing countries that are experiencing rapid industrialization and reform in policy and market-oriented development can be described as emerging economy (Hoskisson, et al., 2000). In furtherance, emerging economy can be used interchangeably with 'developing countries. Therefore, for a better conceptualization of the term 'emerging economy', the definition of 'developing country' must be conceptualized. In 2008, World Bank described developing countries as countries whose economy has a per capita GNP less than US$11,906.

The study of Mardiros and Dicu (2014), identified some salient features that characterize a country THAT IS an emerging economy. This are listed below.

i.   Rapid information spread in a society characterized by a limitation in industrialization.

ii.   A country that many territories with relatively large population, good opportunities for development and economic growth in the terms of power supply and telecommunications systems. They should also possess or be able to enact policies that promote growth and expansion of the economy through trade and investment.

iii.   Emerging economies usually refers to strategy oriented incomes, value and increasing capital investments of markets such as in less developed economies e.g. Asia, Latin America, Eastern Europe, Africa and Mediterranean economies Mardiros and Dicu (2014).

Mardiros and Dicu (2014) further discussed emerging economy under strategic opportunity market (population above 40million, strong GDP and per capita above $2000, rapid adoption of ICT and opportunities for improving people's living standard e.g. China, Indonesia etc), Niche opportunity markets (population less than 40 million, having GNI per capita above $2000, with strong GDP, free from political and economic crisis and capable of improving living standard e.g. Maylasia, Poland etc.) and long term opportunity market (an emerging economy with per capita below $2000, low ICT integration, low standard of living and income and involving high risk e.g. Nigeria, Ghana, Ethiopia, etc.).

Basically, an emerging economy are characterized by a rapid economic growth rate, and free market economy (Hoskisson et al, 2000). Free market in other words, market liberalization in this context

refs to the government policy which allows foreigners to freely and easily buy shares from the countries stock market. However, despite the demanding and high pacing economic growth in such markets, the problems of institutional voids which result in malpractices and manipulations continue to bedevil the liberal market economy as against what obtains in the developed economies (Dominguez et al., 2016). In Brazil, India and China for instance, the free market capitalism is mostly driven by form of fidelity mechanism, where influences of associated groups, personal relationship, allegiance, family, political and sociocultural ties is the order of the day. This usually results in a high level of market uncertainty and instability owing to limited and incongruent government structures (May, Nolke, & Ten-Brink, 2019).

The situation in Nigeria is met with intensive rivalry with regards to state contracts, permit and licenses which forms a basis for bribery and corruption. This is because of high level of non-transparent and bureaucratic nature of government contracts and businesses. Furthermore, just like in other emerging economies, Nigeria's legal frame work is poorly structured and fragile. There is also evidence of inefficiency, ineptitude cumbersomeness and expensiveness of the entire system. These bottlenecks encourage firms to engage informal and illegal dealings such as bribery as a way to avoid the legal institutional practices (Ufere & Gaskin, 2021)

Although research have shown that ICT integration into the Nation's economy holds great promise for business and the general living standard of the people, research remain scanty or completely absent on most relevant applications and constraints of e-business and how these factors have affected the contributions e-business in the growth of SMEs in the emerging economies. This study therefore, will focus on determining how ICT through e-business has contributed to SME growth using the Nigerian economy as a case study.

1.4 Description of SME's e-business opportunities in Nigeria

One of key element in understanding a material or newly industrialize economy is that there is diverse private sector firms of different kinds. The following discuss will focus on different firm size. Generally, SMEs has no universally accepted definition. Understanding if a firm is an SME needs make reference to the basic information of the firm such as; number of employees, gross turnover, and details of balance sheet of the company. In Europe, a Medium-Sized Enterprise is usually defined

as a firm having between 50 and 249 employees, and an annual turnover of less or equal to 50 million Euros. A Small-Sized enterprise is a firm with between 10 and 49 employees and an annual turnover less or equal to 10 million Euros (Ahmed, Lyndon, & Brychan *2015*).

Also in the Nigerian context, some scholars define SMEs using number of employed staff, the invested capital, sector of operation, and the volume of the invested capital and operation (Asghar et al. 2011). Further on this, Etuk et al. (2014) in his study of Nigerian SMEs defined SMEs based such criteria as turnover, number of staffs, returns, working capital, available funding, competitive advantage, and market presence. According to ETUK, the definition can be either on the quantitative or qualitative variables. Quantitative variables consider basically monetary terms such as returns, value of assets, profit, and employee number.

In Nigerian context, also, it has not been easy distinguish between Small Scale and Medium Scale enterprises, as we see next.

According to Pembi (2016), "a Nigerian SME is a business which mainly depends on the owner's resources, earnings, business credit, and short-term loans, without direct access to capital market or long-term credits, employ up to or less than 50 employees and having an initial startup capital of million (₦5m) or less".

Itodo (2006) describes Nigerian SMEs from the perspective of financial capability, quality of staff, and operating strength. Just as Pembi (2013) rightly puts, "SMEs can be recognized based on capital employed, workers employed, turnover, simple management structure, and the forms of the business".

The Nigerian National Council of Industries described SMEs as those whose total costs excluding land is not more than one hundred million naira (N100, 000,000.00) only (Central Bank of Nigeria; CBN, 2020). Furthermore, Udechukwu (2003) in his survey of SMEs and their capacities in Nigeria categorized SMEs into three - namely, Micro/cottage industry, small scale industry and medium scale industry. In his study, he described micro/cottage industry as a firm with a staff strength of 10 or less, with startup capital less than one and a half naira million excluding land. In the same study, small scale industry was described to have a staff strength of 11-100 with working capital less than N50 million excluding the cost or value of landed properties. Medium scale industry was described to have between 101-300 staff strength and working capital of between N50 million to N200 million.

The foregoing discussions insinuate that SMEs have relatively smaller staff strength, and will also face less bureaucracy in decision making. Because of this many Nigerian SMEs are in continuous

search for business growth opportunities in the utilization of ICT for business operations. Olayinka et al. (2016) explorative study of e-business adoption across Lagos, Abuja and Enugu States of Nigeria, observe that SMEs with very small number of staff have higher adoption of ICT than bigger ones. Also, with the increasing demand for ICT by both individuals and organizations, there is indeed a great opportunity for growth. In line with this, Dariem (2021) reports that ICT has remained the fastest growing sector of the Nigeria Economy in the first, second and third quarters of 2021. Evidently, the Nigerian broadband subscription rose from 53,597 to 215,675, between 2007 to 2011 with a rapid increase from 30,000-112,777,785, mobile phone subscribers from 2007 to 2012, while internet usage rose from 0.1% to 32.9% within the same period (Kehinde & Muyiwa, 2016). This success was not achieved without a conscious effort by the government. The Oxford Business Group (2014) report that 'Nigeria has the biggest mobile telecoms market and the largest internet market in the whole of Africa by volume'. Globally, it was assigned 212th by the United Nation in the list of countries with internet users as of 2014. However, its internet penetration was low (32%) being the world's 128th.

Sulaiman et al. (2020) report that Nigeria have fully awakened to the potential of ICT in lifting her citizens from poverty, strengthening the economy and improving her global market competitiveness. In order to improve the situation, the WIN project, E-government project, mobile internet units to mention but a few were the government efforts. As at the year 2019, The mobile users in Nigeria as reported by Nigerian Communication Commission has risen to 180.12 million users.

These efforts by the government places SMEs in good light to use ICT to improve their business operations, however, there is still a gap between what is and what ought to be. This gap exist in forms of corruption, and bureaucratic bottle necks in policy implementation and establishment of all the required and necessary facilities for efficient utilization of these ICTs by business owners.

1.4.1 How can E-business be used to overcome the business challenges in the emerging economy?

Asghar et al. (2011) observe that only a few study has been conducted to investigate the connection between e-commerce and SME growth. With the advent of ICT traditional business practices is expected to change to the todays' dynamic and trending business style (Turban *et al.* 2000).

It is obvious the level of change COVID-19 have caused to the regular business pattern within months due to the governments of nations using different measures and strategies to eradicate the spread. All that has a severe impact on the society, hence a change in the way and pattern of doing things (Arora

2020). Ali (2020) opined that e-business has also created vagaries of opportunities for both new and existing firms by increasing their speed and efficiency in product and service delivery, therefore, causing altercation to the contemporary business operation, which accelerates the quality of services being offered to the customers/clients, particularly in SMEs.

An investigative study by Akanbi (2015) on the use of e-business and its effects on Nigeria SME performance revealed that it increases profitability, productivity, growth, turnover, SME efficiencies, number of customer as well as enhances service delivery, market expansion, SME growth and SME trade internationally. By this finding, it can be inferred that e-business positions Nigerian SMEs to maximize unlimited growth opportunities as is later discussed in this study.

E-business offers several growth opportunities to firms in several ways. This is because the technology has the potential to reach many people worldwide with far less cost. Some of the opportunities are as follows:

a) Reduction in Cost

Authors (Schneider, Perry 2000; Chaudhury, Kuilboer 2002) who investigated e-commerce potential have demonstrated that "using ICT for business have lowered cost and thus, consumers have access to a many goods and services at their disposal just at the click of the button".

b) Penetration to the World Market

According to Gibbs et al. (2003), and Turban et al. (2008), "SMEs through e-commerce adoption have the potential of expanding the markets of developing countries, either through online intermediaries or directly using a website". The investigation by Turban et al. (2008) purports that ICT has the potential to reach millions of people worldwide.

c) Networking

Again from Turban *et al.* (2008) "SMEs can achieve networking among themselves by way of saying production networking, like firms cooperating over such input activities as training, technological development, product design, finance, research development, export promotion, marketing research, transportation, and distribution, and many more". The networking process is a special attribute of e-business as it has the potential to connect people (business and customers), from distant places.

d) Efficiency and Effectiveness

According to Acheampong, R., & Gyawu, P. (2011) Using e-commerce enhances the operations of a business and as a result, reduces the operational cost of firms. Following this argument, Turban et al. (2008) note that "with the advent of e-business, consumers enjoy instant ordering and delivery services, this are experienced when digitize products are downloaded immediately upon payment. Furthermore, there is convenient auction participation where participants can take part in the auctioning from anywhere anytime around the globe; EC ensures improved effectiveness in terms of a widening market and ensuring that customers' needs are well served".

e) Enhancing Communication

E-commerce ensures consistency and accuracy of information. Acheampong, R., & Gyawu, P. (2011) explain that "EC ensures the availability of information by way of ensuring that firms as well as customers find what they need easily and with details and demonstrations".

f) Improving Processes

According to Acheampong, R., & Gyawu, P. (2011), "smaller businesses that want to benefit from electronic commerce need to adopt e-business developmental tools such as e-mail, electronic documents, and database access as part of their daily operations". Other authors (Turban et al. 2008) agree that, "with the advent of the internet and e-commerce, information can be sought for and provided and allow for new products to be based on customers' exact needs".

g) Stimulating Competition

Acheampong, R., & Gyawu, P. (2011) in their study propounds that "E-business enables a company to achieve a competitive advantage and save cost, based on reduced advertising costs; product differentiation by customizing products and timely response to market needs; customer focus through better customer relationships and better customer services".

h) Providing Variety

According to Acheampong, R., & Gyawu, P. (2011) "with e-business and internet technology, consumers have a wider range of products to choose from and it serves as a new medium for commerce".

i) Enhancing Export Marketing

Acheampong, R., & Gyawu, P. (2011) also stated that "E-business brings development to the export market and helps in augmenting the competitiveness of business activities".

Despite numerous benefits that are associated with firms that incorporate e-commerce activities in their operations, several barriers hold back companies' adoption of the Internet and e-commerce. Were therefore try to identify these barriers minimize the impact of e-business on firms growth.

1.4.2 Promoters of E-business technology in Nigerian SMEs

Studies (Jennax et al. 2004; Stockdale, Standing 2004; Levy et al. 2005; Al-Weshah et al. 2011) have proven that certain factors motivate e-business use by SMEs in both developed and emerging economies. For example, Khalid, (2010)find that "government support and incentives are significant in influencing the utilization of ICT for business by SMEs in Pakistan".

An investigation by Omede & Ejeh (2020) on 'how knowledge advancement and application of e-business can impact SMEs growth in Delta State Nigeria', established a significant positive impact on SME growth.

Chibanda (2018) who investigated the enablers and barriers of e-business and noted that "the owner/ manager support and government initiatives are of utmost concern as the main motivators in this regard". Chau and Turner's (2007) survey of Australian SMEs shows that "competitive pressure and government initiatives are the most significant factors determining the extent of e-business adoption there". Others included new market opening and cost reduction, however, organizational factors were insignificant whatsoever.

The aforementioned has shown that the promoters of e-business adoption could either be environmental-related or internal, where the internal factors point to the factors identified as the organizational factors, and/or firm and manager/owner related factor while the environmental factor refers to the business environment in general and that of the technology associated factors. This study with regards to this will focus on finding out those factors that motivate firms, and firm owners to adopt e-business into the organizations.

1.4.3 Factors that constrain the implementation of E-business technology in Nigerian SMEs

According to Folorunso et al. (2006), the prominent inhibitors to the utilization of e-business by Nigerian SMEs is mostly cost of establishment, poor accessibility, poor privacy and confidentiality of data, poor security wares, non-reliability of network, insecure transaction channels such as credit card use and authentication, low citizen's income, lower education level amongst others. An investigation by Olayinka et al. (2016) e-business adoption by Nigeria SMEs in Lagos State Nigeria identified 7 key factors limiting e-business use. According to this study, owner perspective, customer/consumer perspective, internet penetration cost & availability, trust, government policies and regulations and investment cost constituted most challenges encountered by Nigerian SMEs. In addition, Ogundele et al. (2013) in their study of ethical issues affecting e-business development identified over 60 factors amongst which includes; robbery, bribery, embezzlement of fund, destruction of public properties, leaking of official secrets, hoarding of essential commodities, misuse of property and allocated resources.

According to Dedrick and Kraemer (2001), two major factors play a serious roles in the inhibition e-business utilization. They identify poor transportation and delivery systems, absence or scarce availability of computers, poor functional online payment processes, inadequate banking services, and unpredictable taxation rule resulting from political tension and instability. Cloete (2001) enlist absence of information, in adequate time to weigh options, poor access and use of the computer systems, unavailability of hardware and software, inadequate information on e-business models and methods. Furthermore, Cloete et al. (2002) reveal that "low utilization of ICT by business partners, security issues, legality and liability, costs of development and computer and networking technologies for e-business, poor/absence of information on electronic business and inability of the available information on some technologies to convince firm owners of the derivable benefits also hinder the adoption of e-business by some of the companies". Brown (2002) argues that Small and Medium Business Enterprises do not have a strategic plan hence e-business may be perceived as a distraction from business aim. Furthermore, Kaynak et al. (2005) opine that the difficulty in accessing quality human resource to man the technology still poses as major inhibitor to the adoption and use of this technology.

While Bolongkikit et al. (2006) are of the opinion that SMEs perceive that e-business requires high level of human interfacing, Scupola (2003) argues that business owners see e-business as a distraction

resulting in so many unrequired information in the mailbox and so on. Looi (2003) espouses that the absence of pressure from trading partners also dissuades the use of ICT for business. Lawson et al. (2003) concludes that inadequacy in the staff skill and unavailability of data on the internet users also hamper the adoption and spread of e-business technology. In addition, Lacovou et al. (2005) state that absence of awareness by the owner's plays as major setback to the utilization of e-business by the businesses – in this case, the owners do not fully understand the benefits they could derive by adopting. There are also other concerns such as poor knowledge of use of the technology, and low level of computer literacy (Knol, Stroeken 2001). The issue of trust and lack of time by some SMEs contributes to the backlash on the use of e-business (Akkeren, Caraye 2000).

Al-Weshah and Al-Balqa (2012) categorize the constraints to e-business adoption into three places. The three categories are technological, organizational, and external barriers (Chibanda, 2018). The technological barriers can further be divided into insecurity, high costs of implementation, and poor network quality. On the other hand, the organizational barriers can be subdivided into unsuitability of technology, poor trained staff or inadequate staff skill, and inadequate implementation time. The external barriers included inadequate knowledge of technology by customers and suppliers, political instability, a concern for the people's culture and business life, and the legal and regulatory problems. (Al-Weshah, Al-Balqa 2012)

1.4.4 Towards understanding how E-business can be used by Nigerian SMEs

The use of e-business by Nigeria SMEs is referred to in this context as how SMEs apply e-business to overcome their regular/day to day business challenges. In the study by Drew (2003), it was indicated that the "early use of e-commerce was mostly a resultant effect of a combination of management enthusiasm and the need for better firm communication".

Notwithstanding the seemingly wide acceptance of ICT, and its adoption by big business owners in Nigeria, the level of use remains a bone of contention amongst SMEs. This means that although e-business is being used in some firms, the full implementation is still an issue as many of the firms who have adopted e-business have done it only partially. (Chibanda, 2018)

Asghar et al. (2011) who investigated the use of e-commerce by businesses opines that it provides effectiveness and efficiency by enabling buyers extract product information in a more efficient and

easy manner.. Jennex et al. (2004) state that "one of the objectives of SMEs is using e-business is to utilize the opportunity in the foreign international market for development".

Asghar et al. (2011) have identified the different categories/levels of e-business application in small firms. This can is seen in Table 1.

Table 2.1: E-business uses

Categories	Description	Authors
1) E-advertising	- Providing information of product to potential customers - Broadcasting of company information using the website and social media - E-brochures or buying guides/manuals - Display of products based on customers preference or selection or purchase history	Block et al. (1996) Soh et al. (1997) Ainin, Jaffar (2003)
2) Customer support	- Display of frequently help and frequently asked question - Online products manual and update - Online application/registration - Handling customers responses and followup - Personal email	Turban et al. (2000) Fatimah et al. (2000) Ainin (2000)
3) Electronic marketing	- Allowing customer contact sales office - customers, and suppliers - Using the internet to find out customers' needs and want - Using the internet for anticipating customer needs - Sharing information with competitors, - Achieving customer satisfaction through the electronic channel	Arie et al. (1995) Block et al. (1996) Smith, Chaffey (2005)
4) Electronic payment	- Smart and prepaid card - Electronic Fund Transfer (EFT) - Electronic money - Online credit card processing	Block et al. (1996) Lawal (2010) Fatimah, et al. (2000) Zwass (1998)
5) Electronic order and delivery	- Online ordering of software products - Tracking incoming and outgoing goods delivery - Electronic Data Interchange (EDI) - Coordinating procurement with suppliers online - Online order entry and delivery	Turban et al. (2000) Fahri, Omar (2001)

Source: Asghar, 2011

Osama et al. (2013) clearly discussed the activities involved in electronic/online advertising as involving technologies such as flash, Java ads, pop ads and moving images. Tse (2005) opine that this feature gives consumers better perception and hence increases positive buying behavior. Loiacono (2008) observe that is in the development of 'classified advertisement'. This according to him is more appealing to customers who wish to shop online. A review by Bhaskar & Kumar (2008) suggest that advertising become more effective in drawing the consumers attention to a specific product. This study also notes that set back of time spent in the search process usually stand as setback, however, the advantage in the end outweighs the drawback.

A study conducted by Iluno and Yakubu (2017) on the impact of e-commerce on customer satisfaction in Kaduna State metropolis in Nigeria revealed that the continuity of any e-business depends largely on the customer support. Kumar & Kumar (2014) observe that E-business resulted in a tremendous improvement in customer relation and service management. The pop-up messages which greets customers as soon as they visit a website showing that there is someone ready to respond to their enquiry encourages the customer to a large extent in making the decision to purchase a product as most information that they may require further clarifications would easily be given answers (Kumar & Kumar, 2014).

Kumar & Kumar (2014) suggest that the application of e-business in product marketing is the easiest and the most cost effective means to guaranteeing global reach to customers. Ighomereho & Iriobe (2019) in their study of the application of e-marketing in Nigeria identified that global reach, 24/7 marketing, personalization of customer's data, one to one marketing, increased interactivity, and new product development were the major focus of the firms.

An empirical study by Ifinedo (2012) identified only "Automated Teller Machine (ATM), cards, internet mobile payments, financial services kiosks, biometric payments, electronic payment networks and POS payment systems" as the available electronic payment systems in Nigeria. Okifo & Igbunu (2015) categorized the e-payment systems (EPS) as "end to end processing and manual e-payment or use of mandate". The former was described as a payment system that allows the entire payment process from approval to receipt of value to be conducted online. The later involves the combination of electronic system and manual process in the payment process.

Electronic order and delivery basically mean the application of e-business tools in the ordering and delivery processes of goods and/or services. Akanbi (2015) in his study of the impact of e-commerce

on Nigerian SMEs, discovered that e-commerce was basically applied in goods purchase, tracking of incoming and outgoing goods, and online ordering of goods.

While Akanbi (2015) focused mostly on Nigeria SMEs using e-business and who are located in Lagos State Nigeria, this study attempts to widen this scope, by studying other SMEs in other geopolitical zones of the country. This findings will serve as meter rule to level of applicability of the research findings of Akanbi.

1.5 E-Business Model

One of the best Ways to view e-business models is to see it as the patterns or the type of individual or firms that a firm or individual does business with using the internet. The term e-business model is mostly used in the context of e-business research (Timmer 1998, Amit and Zott, 2001, Cheng et al., 2001). The description of Business models may gear towards the various components of a given business. However, e-business model is used to describe how firms in the course of the business process utilize the Internet for the purpose of interaction among themselves, value creation for customers, suppliers, partners, employees, and other stakeholders (Applegate, 2001).

E-business model for the purpose of this research study will focus mostly on the B2B, B2C, and C2C business models as identified by (Dai & Kauffman, 2001) being the commonly used model in most emerging economies.

The key components important in understanding e-business model proposed by Amit and Zott (2001) were "content: which describes the exchanged goods and information and also, the resources required to facilitate the exchange". Secondly, "structure: which refers to stakeholders and how they are linked to each other, and thirdly, governance of transactions which is a description of the control of directional flow of goods, information, and resources and in addition, the legal association formed". As theorized by Afuah and Tucci (2001), customer value, revenue price, sources, scope, implementation, connected activities, capabilities, and sustainability are key components of a business model which are applicable to both e-business models and traditional business models. Together, they make up for three main kinds of e-business model.

1. **B2B E-business model**

Primarily, B2B business model is used to describe a business transaction that occurs between suppliers, manufacturers, producers and distributers, retailers, and other forms of market intermediaries. B2B e-business were formally a phenomenon that existed only within the business world however, this has gradually begun to gain academic concern (Gebauer & Shaw, 2002). Laudon and Traver (2002) and Turban & King (2003) describes B2B e-business model in terms of its ability to automate trading processes.

In the Nigeria market for instance, many SMEs utilize the B2B business model to carry out business transactions with other business firms. Such firms may include but not limited to input aggregators, and firms which serve as mediators along different product value chain. They either had to source the raw materials in their crude forms, and distribute/supply them to other firms who use them in the production of the final consumer goods or they are wholesalers, dealers, and mega dealers of products manufactured by other firms.

2. **B2C Business Model**

Business to consumer e-business model (B2C e-commerce) can be used to describe an e-business that is structured in a way that the firm or business sells its product or services directly to the individual consumers. In some developing countries such as China this has become the recent trend (Chen et al. 2019). This model plays major role in the enabling the firms to stand out amidst fierce market competition. According to (Afuah, and Tucci, 2001) business model increases the strength of firms in addition to their strength by giving them a more domineering market presence through greater value provision which enables them to surpass their competitors.

Chen et al. (2019) established that B2C e-business model improves customer experience through better shopping experiences for customers. This further strengthens customer loyalty.

3. **C2C Business Model**

Within the context of Consumer-To-Consumer (C2C) ecommerce business model, the product consumers sell their goods or services directly to consumers using an independent online website which has been created with prior motive of serving the purpose of C2C (Chibanda, 2018). Ideally, every when a consumer sells goods to a consumer, is categorized as C2C e-commerce business model (Chibanda, 2018). According to Lavanya (2019) e-business model usually does not involves an

upfront payment. Also, there is no limitations in the variety of products and services as different consumers sells to consumers across globe where any internet enabled communication platform can host the C2C business model (Chibanda, 2018).

1.7 Emerging Framework of the Study

The emerging framework of the study explains the hypothesized relationship between the various factors under this study. These concepts under this study are e-business application, e-business promoters, e-business constraints and perceived growth of firms owing to e-business application.

The dependent variable in this study is the application of e-business is described as the use of e-business technologies in terms of e-marketing (Allowing a customer to contact a sales office Share information with competitors, customers, and suppliers, Achieving customer satisfaction through the electronic channel etc.), e-payment (electronic money transfer etc.), electronic ordering and delivery (Coordinating procurement with suppliers online, Online ordering of software products and Tracking incoming and outgoing goods delivery), electronic customer support services (Online products manual and update, Handling customers feedback/queries and follow-up online etc.), and electronic advertising (e-brochure, web display of company information, web display of product information).

The intervening variables includes the promoters e-business enablers) and e-business constraints (e-business inhibitors). The outcome includes those benefits or perceived growth areas in the firm (market penetration, product development, market development etc.).

The schema in Figure 1 shows the direction of interaction between the various factors and consequently the contribution of e-business to the growth of SMEs.

Dependent variables

E-business Application

- Electronic advertising
- Customer support
- Electronic payment
- Electronic order and delivery
- Electronic marketing

Intervening variable

Promoters of E-business

Industry specific factors

E-business Enablers

Firm specific factors

Intervening variable

E-business constraints/inhibitors

- Industry related factors
- Manager/owner related factor
- Technology related factors
- Environmental factors

Outcome

Growth/benefits arising from e-business application

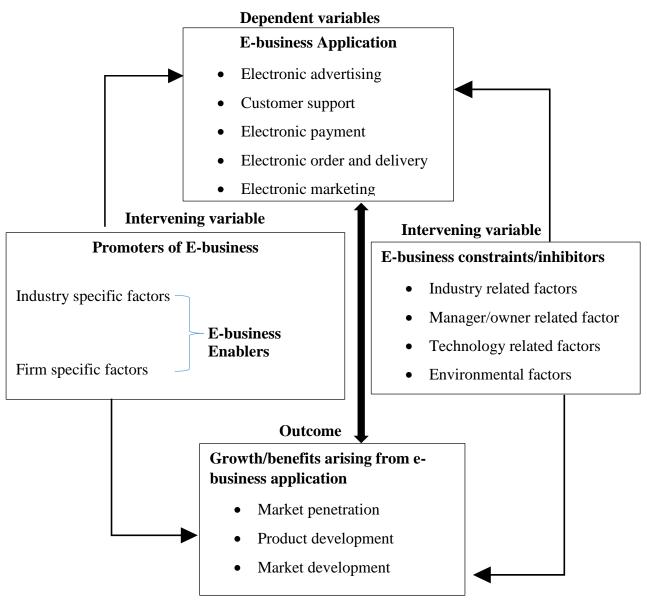- Market penetration
- Product development
- Market development

Figure 2.1: Schematic illustration of e-business application and impacts

Source: Author's own construct

2. RESEARCH METHODOLOGY

This chapter focuses primarily on the hows, whys and whats decisions and choices used in conducting this research. It is basically the design, intent, approach, and strategy of the research. It will also include the sample selection method, methodological quality standards, and the analysis of the data.

2.1 Research Design

According to Neumann (2006), the general views and idea people have which describes the nature of research and intervention is referred to as research paradigms (Neumann, 2006). Saunders and Lewis added that it has to do with the strategy employed in discovering the globe. In their definition (Saunders et al., 2007, pp.104), research philosophy is defined as evolution of knowledge, ideas, thought, and opinions and how these are categorized in research. Research paradigm determines such approaches to research as, data collection, sampling techniques and the general processes of research (Saunders, et al., 2007). This study utilized the purposive sampling technique because of it nature. This means that the participants in the research must possess certain qualities to be able to provide relevant information for the study. The data were collected using semi-structured interview question. This was necessary as the method provided an in-depth information on the participants' knowledge on the key issue.

In understanding research philosophy, Ontology refers to the researchers view of reality, while epistemology refers to a knowledge that is acceptable. Furthermore, Saunders et al. (2007) noted that epistemological assumptions are defined based on their features being objectivism, subjectivism and pragmatism positivism, realism, interpretivism, and pragmatism remains the major branches of research philosophy. However, business and management research are synonymous with pragmatism which combines positivist (quantitative) with an interpretative (qualitative) approach. For this research, the pragmatic approaches is used. This approach not only helped in providing sufficient information but ensured that information provided were relevant to the research questions.

There are two approaches to data collection: quantitative and qualitative methods of data collection (Neumann 2006). Saunders et al. (2007) describe qualitative data collection as a technique that extracts non-numeric data such as words, pictures, or video clips, while in quantitative data collection, the researcher focuses on numerical data.

For this study, a quantitative approach has been chosen since it is more appropriate for generating data which can be used for hypothesis testing and, hence establishing important hypothetical relationships.

This study will be mostly descriptive in finding out how e-business has contributed to the growth of SMEs in emerging economies, such as Nigeria, explore their challenges, and make recommendations based on findings. Usually, data collection can come from various sources Denscombe (2000), from documents, through interviews, direct observation, and participant observation.

In this study, the primary data will be collected using google form structured questionnaire, while secondary data will be sourced from online and offline journal, magazines, textbooks, newspaper, articles etc.

2.2 Choice of Sample and Sampling Procedure

2.2.1 Population

According to 'TheCable' news, the Nigeria Cooperate Affairs Commission has registered an estimated number of 41.5million SMEs (Thecable, July 8, 2021). This population forms the sample frame for the study. However, SMEs which employ the internet and e-commerce strategies in their business comprised the target population. The chosen population is such that the questions in the research instrument will be applicable to them and so that the data that will be extracted thereafter would be relevant to the study.

2.2.2 Sample size

Although of the sample frame of 41.5 million forms the known sample frame for the study, there is no official statistics on all the SMEs which utilize e-business in Nigeria by the time when this study was conducted. The study using snowball sampling targets to sample up to 1000 e-business SMEs which duly satisfy the criteria for selection as stated above would be sampled for the study.

In each company, the electronic questionnaire would be shared with any principal staff, or owner or his designated representative who commands reasonable influence in the organization, and as such considering the subject under study it is prudent to get response directly from the owners/C.E.O or their own elected representatives.

2.2.3 Sample Selection

The constraints to every research is such that one cannot carry out research on every single entity, (Miles and Huberman 1994). For this reason, sampling is inevitable. For this study, only a smaller sample will be used as is usual in research.

For this thesis I will use the purposive sampling method since the respondents must fulfil certain features (Saunders et al, 2007), which include the following:

- Must fall into the category of SMEs as defined in the Nigerian context which describes SMEs as business entities employing fifty (50) people or less with a capital outlay of five million (₦5m) or less (Pembi, 2016).
- Must be found in the list of registered SMEs directory of CAC of Nigeria 2019.
- Must employ ICT in its business activities.
- Must be willing to participate in the survey by giving out the relevant data.

2.3.4 Research Instrument

A fully structured research questionnaire was utilized to collect data from the respondents. The questionnaire was designed in a way that enables ease of understanding of the questions used in the assessment. The instrument has 5 sections. In the first section, questions that border on the description of the SMEs were asked, and the respondents were asked to choose from provided options, the options that best describe their firm while directly entering the response where it is required. The questions asked here was on location of business, ownership of website by firm, location of target customer, nature of business (goods and/or services) and the model of e-business (B2C, etc.) operated within the firm.

In the second section, the respondents were asked to choose from the available options (as many as possible), the statements which describe how and what they use e-business for within the firm.

The third, fourth and fifth sections were likert scale questionnaire type. The measurement statements in section three were used to determine important contributions of e-business to SME growth. The statements were weighed as Very significant (VS = 4), Significant (S = 3), Not significant (NS = 2) and Not At all (NA = 1). The weight of each statement in section 4 and 5 were measured as Strongly agreed (SA = 4), Agree (A=3), Disagree (D = 2) and Strong Disagree (SD = 1). The questions in

section four was used to determine the factors that promote the use of e-business by SMEs, while section 5 was used to ascertain the strength of the existing constraints identified by past researches. In this sections (section three, four, and five), the respondent is required to weigh each statement based on his/her own perception with regards to his/her own firm by ticking the appropriate cells and column.

2.3.5 Analysis of Data

Acheampong & Gyawu (2011) in his research described data analysis is a process that involves examining, categorizing, tabulating the evidence to address the initial proposition of the study

The following system was created based on theoretical support to analyze the data: for each of the four cases, the following aspects were considered based on the interview:

- Contribution of e-business to growth of the company

- Factors that promote the application of e-business

- Factors that constraint the adoption of e-business by the company

The objectives one which is to describe the application of e-business by Nigeria SMEs will be analyzed using percentage and frequencies. The respondents will select which of the measurement variables (the e-business applications) which are relevant in their firms.

Objective two, three and four would be analyzed using frequency count, and percentages. Four-point Likert type scale rating of very significant (4), Moderately (3), not significant (2), not all (1) would be used to weigh the responses of the respondents on the contributions of e-business to the growth of their firms. Four-point Likert type scale rating of Strongly agree (4), agree (3), disagree (2), strongly disagree (1) would be used to weigh their responses on the factors they perceive promoted the adoption and implementation of e-business (objective 3) and the factors they perceive are constraints to the adoption of e-business by their firms (objective 4).

2.3.6 Hypotheses to test

H_{01}: The application of e-business technologies by SMEs does not significantly affect the growth of SMEs

H_{02}: The constraints to e-business technologies does not significantly affect the growth through e-business application of SMEs

H₀₃: The promoters of business application do not significantly affect the growth through e-business application of SMEs

Would be achieved using the Ordinary Least Square Multiple Regression Model stated as follows.

$$Y = f(X_{i-n}, e)$$

Where.

Y = the dependent variable (those statements which define the contribution of e-business to the growth of SMEs)

$X_1, X_2, X_3…X_n,$ = the independent variable (which in hypothesis I are those statements which describe the application of e-business, while for hypothesis II, are those statement which represent factors that promote the use of e-business, and in hypothesis III, it is defined as those factors that constrain the use of e-business)

e = error term

The choice of this model is due to its suitability for testing relationships and suitability for large samples sizes. It goes ahead to show the individual relationship between each independent variable and the dependent variable.

2.3.7 Validity

Yin (2009) observes that "chains of evidence allow the external observer to follow the derivation of any evidence from initial research questions to ultimate case study conclusions". To ensure the quality of this thesis, literature is used for defining and explaining the terms used in the conceptual framework and research questions. The interview guide was reviewed by the supervisor to ensure that questions reflected in the research instruments and research questions are easy to understand, appropriate, and correctly stated. The choice of research methods was carefully considered. In addition, the work in progress was adequately monitored and supervised by my supervisor.

2.3.8 Reliability

Saunders *et al.* (2007) describes reliability as a measure of similitude in results on other occasions and similitude of observations with other observers. In ensuring reliability for this thesis, I had a clearly defined and systematic approach to the study. The secondary data collected is properly cited and referenced. Questions used in the data collection instrument are generated in a way that it answers the

research questions and in manner that conforms to findings from prior research. All the steps described in the methodology and analysis are strictly followed to guarantee systematic and structured approach to the collected data.

3. DATA ANALYSIS AND RESULTS

This section presents the results of the analyzed data. The results are presented according to the objectives and then followed by the study hypothesis of the study. Here, before the findings on the objectives, the first section present basic firm characteristics of the firms that participated in the study. It provides information on the business location, on firm ownership of website, on the number of staff, on years business has been in operation, on nature of business enterprise, and on business model of the firm.

The second section of this chapter shows the empirical findings on the e-business application by the SMEs, Contributions of e-business to SMEs' growth, Factors that promote the use of e-business and factors that constrain the use of e-business by the firms. The result is discussed following the presentation of each finding in the table.

3.1 Results

3.1.1 Firm Characteristics

Table 3.1 below shows the staff strength of the various firms interviewed for the purpose of this study. The mean ($\bar{X}$) staff number was found to be 8, majority of the SMEs had staff number ranging between, 1-5.

The table also shows that most (73.6%) firms surveyed were new startups, that have operated within 1-5 years, while only few (2.1%) of the firms have lasted beyond 20 years. The average years of operation for the firms is 5 years.

The implication of the average age is that many entrepreneurs may have been taking advantage of the recent explosion in the number of ICT users in Nigeria to anchor their businesses on the cyber space.

Generally, extend the study of SMEs use of e-business beyond a few states to a total of 14 states of the federation as shown in the 3.1. This is good as it goes beyond the limit of previous studies (Akanbi, 2015; Olayinka et al. 2016) to show the situation of e-business use by SMEs in many other Nigerian State.

Table 3.1: Distribution of SMEs according to the characteristics

Company characteristics		
SME locations	**Frequency (F)**	**Percentage (%)**
Lagos	106	37
Imo	75	26
Abuja	23	8
Enugu	14	5
Abia	14	5
Anambra	14	5
Edo	9	3
Ibadan	9	3
Port Harcourt	9	3
Calabar	3	1
Delta	3	1
Kogi	3	1
Plateau	3	1
Ondo	3	1
SME ownership of website		
SMEs that own a website	107	37
SMEs that do not own website	181	63
Staff number		
1-5	178	61.8
6-10	50	17.4
11-15	24	8.3
16-20	6	2.1
Above 20	24	8.3
Years in business operation		
1-5	212	73.6
6-10	52	18.1
11-15	8	2.8
16-20	10	3.5
Above 20	6	2.1
Nature of business		
Goods manufacturing and distribution	89	31
Services	197	69
Nature of business model		
Business to business (B2B)	43	15
Business to consumer (B2C)	228	79
Consumer to consumer (C2C)	17	6

Source: Field survey data, 2021

3.1.2 Application of e-business by Nigeria SMEs

Table 3.2 below shows how SMEs apply e-business in their various business operations.

The data in the table was also ranked to show most popular uses of e-business by the firms. The result revealed that Providing information of product to customers(82.6%), Using internet to find out customers' needs and want (62.5%), online update of products (59.0%), customers feedback/queries online(58.3%), Using internet for anticipating customer needs (52.1%), online displaying company information (50.7%), Allowing a customer to contact a sales office (50.0%), Achieving customer satisfaction through the electronic channel (43.8%), Electronic Fund Transfer (EFT) (43.8%) and Online order entry and delivery (42.4%) were the most common applications of e-business by the SMEs.

Table 3.2: Distribution of respondents according to their e-business application

S/N	Applications	Frequency (F*)	Percentage (%)	Ranking
1.	Providing product information to customers	238	82.6	1st
2.	Using internet to find out customers' needs and want	180	62.5	2nd
3.	Online products update	170	59.0	3rd
4.	Handling customers feedback/queries online	168	58.3	4th
5.	Using internet for anticipating customer needs	150	52.1	5th
6.	Displaying company information on website	146	50.7	6th
7.	Allowing a customer to contact a sales office	144	50.0	7th
8.	Achieving customer satisfaction through the electronic channel	126	43.8	8th
9.	Electronic Fund Transfer (EFT)	126	43.8	8th
10.	Online order entry and delivery	122	42.4	10th
11.	Online help and frequently asked question	114	39.6	11th
12.	Display of product which are relevant to the particular customer	112	38.9	12th
13.	Share information with competitors, customers, and suppliers	98	34.0	13th
14.	Online electronic brochures or buying guides	94	32.6	14th
15.	Personalized email communication	94	32.6	14th
16.	Tracking incoming and outgoing goods delivery	90	31.3	16th
17.	Online application/registration	88	30.5	17th
18.	Lower costs per transaction	78	27.0	18th
19.	Electronic money	68	23.6	19th
20.	Online credit card processing	64	22.2	20th
21.	Coordinating procurement with suppliers online	64	22.2	20th
22.	On-line ordering of software and products	56	19.4	22nd
23.	Smart and prepaid card	40	13.9	23rd
24.	Electronic Data Interchange (EDI)	40	13.9	23rd

Source: Field Survey Data, 2021; Multiple response*

The other applications of e-business as suggested in this study may not have gained much attention by the Nigerian SMEs maybe due to their complex nature, cost, or anticipated benefits. The ranking showed that smart and prepaid card payment options, and electronic data interchange which were

being used by 13.9% of the respondents and were the least popular amongst the e-business applications.

During the literature review, we see the classification of e-business application in five basic ways (Asghar et al, 2011). Just as we see in this study, SMEs have applied e-business for electronic advertising (Osama, 2013), electronic customer support (Illuno & Yakubu, 2017), electronic marketing (Ighomereho & Iriobe, 2019), electronic payment system (Okifo & Igbunu, 2015) and electronic order and delivery (Akanbi, 2015). It is therefore observable that e-business have gained great traction in virtually all aspects of business operation in Nigeria. This may be due to the perceived or anticipated growth by users, and hence when this perception comes true, there is no doubt that the level of use will continue to increase.

3.1.2.1 Hypothesis test I

Table 3.3 below shows the regression result of the hypothesis analysis for relationship between the application of e-business and its contribution to the growth of SMEs.

The test helps to ascertain if really, the application of e-business has any significant contribution to the growth of SMEs in specific ways. The coefficient of determination (R^2) was found to be 0.68 which suggests that 68% variation in the SME growth (dependent variable) is largely a function of their level of e-business usage (independent variable).

The result showed that at $p < 0.05$, displaying company information on website ($p = 0.036$), online electronic brochures or buying guides ($p = 0.040$), displaying a rage of product which are relevant to particular customer ($p = 0.004$), online product update ($p = 0.037$), handling customer feedbacks/queries online ($p = 0.014$), online application and registration ($p = 0.032$), personalized email communication ($p = 0.011$) amongst others significantly contribute to the growth of SMEs when they are used.

Although some applications or use of e-business ($p < 0.05$) does not have a significant relationship with SME growth, the overall use of e-business significantly and positively influence the growth of SMEs. In conclusion, at $P_{0.05} = 0.012$, the null hypothesis is rejected, which invariably means that there is a significant relationship between the application of e-business and the contribution of e-business to SME growth.

Kamshad (1994) in support of Gibrat theory of business growth (Gibrat, 1931) stated that the innovativness of a firm is a single and most popular strategy for business growth and expansion. The established relationship between the application of e-business and the contribution of e-business to SME growth in this study is therefore validated by this theory.

Table 3.3: Result of regression analysis of Hypothesis 1 "There is no significant relationship between the application of e-business and the contribution of e-business to SME growth"

Independent variables	β- value	T-value	p-value
(Constant)	53.884	29.423	0.000
Providing product information to customers	0.387	0.199	0.843
Displaying company information on website	2.245	1.500	0.036
Online electronic brochures or buying guides	1.697	0.958	0.040
Display only a range a product which are relevant to the customer	-4.531	-2.899	0.004
Online help-frequently asked question	-0.053	-0.031	0.975
Online products update	-1.542	-0.965	0.037
Handling customers feedback/queries online	-2.479	-1.593	0.014
Online application/registration	-2.077	-1.201	0.032
Personalized email communication	3.320	2.041	0.043
Allowing a customer to contact a sales office	-2.762	-1.606	0.011
Share information with competitors, customers, and suppliers	-2.293	-1.329	0.186
Using internet to find out customers' needs and want	-1.277	-0.744	0.458
Using internet for anticipating customer needs	-0.506	-0.288	0.774
Achieving customer satisfaction through the electronic channel	4.852	2.885	0.005
Electronic Fund Transfer (EFT)	2.238	1.491	0.039
Online credit card processing	1.686	0.907	0.366
Electronic money	-0.016	-0.007	0.994
Smart and prepaid card	-0.265	-0.117	0.907
Coordinating procurement with suppliers online	-5.905	-2.889	0.005
Online ordering of software products	1.897	0.914	0.362
Lower costs per business transaction	2.641	1.374	0.172
Tracking incoming and outgoing goods delivery	3.999	2.057	0.042
Online order entry and delivery	-1.575	-0.977	0.031
Electronic Data Interchange (EDI)	1.933	0.778	0.038

Source: Computed from Field Survey, 2021; R = 0.825; R^2 = 0.68; $F_{(24,119)}$ = 1.910; $P_{0.05}$ = 0.012; *significant at 0.05

3.1.3 Contribution of E-business to the growth of Nigerian SMEs

The contributions of e-business were measured using Likert type rating and presented in table 3.4 below. The various statements were ranked using the mean score to show which of the statements is truer than the other based on the responses received. The factors whose mean is less than ($<$) the grand mean is adjudged as not a significant contribution of e-business amongst the SMEs (rejected) while the factors whose mean score ($\bar{X}$) is greater than ($>$) the grand mean ($\bar{X} = 3.31$) is considered as a significant contribution made by e-business towards the growth of SMEs. The result shows that e-business have contributed to the growth of SMEs through enhanced communication ($\bar{X} = 3.59$), information resource and knowledge sharing ($\bar{X} = 3.58$), expansion of market to reach people worldwide ($\bar{X} = 3.54$), improved process through new consumer customer contact ($\bar{X} = 3.47$), transportation and distribution ($\bar{X} = 3.38$), marketing research ($\bar{X} = 3.37$), and product design ($\bar{X} = 3.32$). The small value of the standard deviation (SD$<$1) across the table also indicates that there is similarity in the responses received from the respondents.

Table 3.4: Distribution of respondents according to contributions of e-business to their business growth

Contributions	Very Significant	Significant	Not Significant	Not at all	Mean	SD	Rank
Enhanced communication	190 (66.0)	84 (29.2)	10 (3.5)	4 (1.4)	3.59*	0.62	1st
Information, resource, and knowledge sharing amongst trading partners	182 (63.2)	92 (31.9)	14 (4.9)	0 (0.0)	3.58*	0.58	2nd
Expansion of market to reach people worldwide	186 (64.6)	78 (27.1)	18 (6.3)	6 (2.1)	3.54*	0.70	3rd
Improved processes through new consumer customer contact	160 (55.6)	106 (36.8)	20 (6.9)	2 (0.7)	3.47*	0.65	4th
Transportation and distribution	112 (38.9)	124 (43.1)	42 (14.6)	10 (3.5)	3.38*	2.61	5th
Marketing research	150 (52.1)	106 (36.8)	22 (7.6)	10 (3.5)	3.37*	0.77	6th
Product design	152 (52.8)	100 (34.7)	18 (6.3)	18 (6.3)	3.34*	0.85	7th
Training	144 (50.0)	108 (37.5)	22 (7.6)	14 (4.9)	3.32*	0.81	8th
Provides variety	118 (41.0)	108 (37.5)	34 (11.8)	24 (9.7)	3.30	2.66	9th
Research development	146 (50.7)	102 (35.4)	20 (6.9)	20 (6.9)	3.29	0.87	10th
Increased consumer access at lower cost	128 (44.4)	126 (43.8)	22 (7.6)	12 (4.2)	3.28	0.78	11th
Easy and instant delivery of goods and services	138 (47.9)	98 (34.0)	40 (13.9)	12 (4.2)	3.25	0.85	12th
Stimulating competition	110 (38.2)	142 (49.3)	24 (9.7)	8 (2.8)	3.22	0.73	13th
Reduces operational cost	164 (39.6)	102 (35.4)	48 (16.7)	24 (8.3)	3.06	0.94	14th
Task assigning among trading partners	74 (25.7)	154 (53.5)	52 (18.1)	8 (2.8)	3.02	0.74	15th
Export promotion	98 (34.0)	116 (40.3)	40 (13.9)	34 (11.8)	2.96	0.97	16th

Source: Field Survey, 2021; Gran Mean = 3.31; *Contributed ≥ Grand Mean; SD = Standard Deviation; figures in parenthesis are percentage while that outside are frequencies

In support of this result, Akanbi (2015) who studied e-business use in the context of emerging economy opine that e-business enables SMEs to link up their internal and external data and have a more efficient data processing for anticipation and satisfaction of customers' needs. Kalanje (2002) viewed it as a new way for SMEs to reach new customers. Turban (2008) suggest improved process

and enhanced communication as ways e-business have benefited SMEs. Also, Ali (2020) added that it improves speed of order and delivery operations.

The findings of this study are consistent with the reports of different authors' reviewed work in the literature. This means that what obtains in Nigeria according to this study is also found in other places especially in the emerging economies. It is therefore notable that SMEs are not let in the dark of the growth benefits of e-business when integrated into their business operations. Therefore, it can be deduced that SMEs have really exploited e-business and enjoyed the benefits that accrue with it. The result of this study can be evidence that SMEs will continue to invest in e-business so long as it continues to give them their anticipated benefits.

3.1.4 Factors that promote the use of E-business amongst SMEs

Table 3.5 below shows the ranks of the various factors which promote the use of e-business technology by SMEs.

The factors whose weighted mean which are greater than or equal to the grand mean ($\bar{X} = 3.07$) were accepted as promoters while factors whose weighted mean score is less than the grand mean was rejected as factors strongly promoting the use of e-business amongst SMEs.

The result shows that technology related factors such as; its ability to enable then reach new customers ($\bar{X} = 3.90$), its ability to improve customer relations and efficiency ($\bar{X} = 3.73$), owner/manager support ($\bar{X} = 3.61$), increased sales ($\bar{X} = 3.51$), expansion of customer base ($\bar{X} = 3.44$) ranked highest among others as the factors that promote the use of e-business.

Based on the grand mean judgment, pressure from trading partners ($\bar{X} = 2.88$), governmental support and incentives ($\bar{X} = 2.65$) and government initiatives ($\bar{X} = 2.59$) did not facilitate the use of e-business amongst the SMEs.

Table 3.5: Distribution of respondents according to the factors that promote the use of e-business in their business organization

Factors	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean ($\bar{X}$)	SD	Rank
Its ability to reach new customers	188 (65.3)	92 (31.9)	8 (2.8)	0 (0.0)	3.90*	3.40	1st
Its ability to improve customer relations and efficiency	154 (53.5)	116 (40.3)	14 (4.9)	4 (1.4)	3.73*	3.44	2nd
Owner/manager support	182 (63.2)	102 (35.4)	4 (1.4)	0 (0.0)	3.61*	0.51	3rd
Increased sales	164 (56.9)	108 (37.5)	16 (5.6)	0 (0.0)	3.51*	0.60	4th
Expansion of the customer base	158 (54.9)	102 (35.4)	26 (9.0)	2 (0.7)	3.44*	0.68	5th
Anticipated benefit	146 (50.7)	122 (42.4)	16 (5.6)	4 (1.4)	3.42*	0.66	7th
Time savings	164 (56.9)	88 (30.6)	26 (9.0)	10 (3.5)	3.40*	0.79	6th
Its enables easy opening of new markets	136 (47.2)	130 (45.1)	22 (7.6)	0 (0.0)	3.39*	0.62	8th
Pressure from customers	82 (28.5)	142 (49.3)	58 (20.1)	6 (2.1)	3.25*	2.60	9th
Employees' knowledge	94 (32.6)	164 (56.9)	28 (9.7)	2 (0.7)	3.21*	0.63	10th
Competitive pressure	100 (34.7)	130 (45.1)	54 (18.8)	4 (1.4)	3.13*	0.75	11th
The reduction of costs	90 (31.3)	128 (44.4)	54 (18.8)	16 (5.6)	3.01	0.85	12th
Pressure from trading partners	70 (24.3)	124 (43.1)	84 (29.2)	10 (3.5)	2.88	0.81	13th
Governmental support and incentives	64 (22.2)	94 (32.6)	98 (34.0)	32 (11.1)	2.65	0.94	14th
Government initiatives	56 (19.4)	96 (33.3)	100 (34.7)	36 (12.5)	2.59	0.94	15th

Source: Field Survey, 2021; Gran Mean = 3.07; *Contributed ≥ Grand Mean; SD = Standard Deviation; figures in parenthesis are percentage while that outside are frequencies

It can be deduced that most of the promoters of e-business use by the SMEs were tied closely to the ability of the technology to deliver on benefits anticipated and on the ability of the business organization to manipulate this technologies or tools to suit and solve their business needs.

In corroborating this finding, Beck et al, (2005) and Kaynak et al, (2005) have highlighted the place of improved customer service, increased sales, reaching new customers, and cost reduction as relevant stimulators for the use of e-business. This is to say that SMEs are now aware that their growth is tied to e-business use. Hence, they are constantly in search of the e-business technologies which hold benefits for their firm.

In contrary, government support and incentives pointed out in the works of Jennax et al. (2004), Stockdale & Standing (2004), Levy et al. (2005) and Al-Weshah et al. (2011) was not a promoter to e-business use according to this study. This may be due to political instability, and the recession problem which have distorted the development activities of most nations including Nigeria.

3.1.4.1 Hypothesis test II

Table 3.6 below shows the regression result of the hypothesis analysis for relationship between the factors that promote the use of e-business and its contribution to the growth of SMEs.This analysis underscores how the presence of certain factors which promote the use of e-business can increase the benefits SMEs get in terms of growth from e-business.

The result shows that owner manager support (p=0.018), anticipated benefits (p=0.020), its ability to enable them reach new customers (p=0.038), pressure from trading partner (p=0.034), government support and initiatives (p=0.002), competitive pressure (0.009) and reduction of cost (p=0.011) are the factors that have significant (p<0.05) relationship with the contribution of e-business to SME growth.

The R value which is positive shows that the relationship is positive, and the determinant of determination (R^2=0.56) suggests that over 56% variation in the dependent variable (contributions of e-business to the growth of SMEs is explained or attributable to the variation in the independent variable (the promoters to the use of e-business). The probability value for the table P0.018<0.05 also suggest a rejection to the null hypothesis. This therefore means that there is a significant relationship between the presence of those factors which promote the utilization of e-business and the contributions of e-business to SME growth.

Theory of business growth according to Coad (2005) has a close tie with what a firm do to improve its performance. Coad (2005) discussion was based on the principle of growth of the fitter. This means that most SMEs who have suffered poor visibility and little market share are looking for opportunities

to improve their performance and when they find it, growth is imminent. This, therefore, explains the relationship between those factors which promote the use of e-business and the contributions of e-business to SME growth

Table 3.6: Result of regression analysis of Hypothesis II "There is no significant relationship between the factors which promote the use of e-business and the contribution of e-business to SME growth"

Independent variables	β- value	T-value	p-value
(Constant)	25.504	4.063	0.000
Owner/manager support	1.126	0.813	0.018
Increased sales	1.192	1.095	0.276
Anticipated benefit	-1.352	-1.288	0.020
Its ability to enable them reach new customers	0.222	1.185	0.038
Employees' knowledge	-0.601	-0.535	0.594
Pressure from trading partners	1.780	2.143	0.034
Pressure from customers	-0.018	-0.075	0.940
Governmental support and incentives	3.383	3.168	0.002
Competitive pressure	0.509	0.510	0.611
Government initiatives	-1.799	-1.612	0.009
It enables easy opening of new markets	2.019	1.808	0.073
The reduction of costs	2.315	2.569	0.011
Its ability to improve customer relations and efficiency	0.071	0.392	0.695
Expansion of the customer base	0.391	0.353	0.725
Time savings	-0.431	-0.467	0.641

Source: Computed from Field Survey, 2021; R = 0.752; R^2 = 0.56; $F_{(16,127)}$ = 1.992; $P_{0.05}$ = 0.018; *significant at 0.05

3.1.5 Constraints to the use of E-business amongst SMEs

Table 3.7 below shows the results of the analysis of the factors which strongly constrain the use of E-business amongst Nigerian SMEs in it use for their business operations.

In the analysis of the data whose result are contained in table 3.8, factors whose weighted mean are greater than or equal to the grand mean ($\bar{X} = 2.97$) were accepted as strong constraints factors while those whose weighted mean score is less than the grand mean were rejected as constraints to the use of e-business. It is, however, important to note that all the factors above were identified as constraints though the level of constraints it poses was weighed using the likert type rating to determine their seriousness as a constraint.

The result showed that network quality ($\bar{X} = 3.72$), lack of awareness of the technology perceived benefits ($\bar{X} = 3.43$), lack of expert staff ($\bar{X} = 3.23$), security issues ($\bar{X} = 3.17$), cost of implementation ($X = 3.15$), and concern for cultural environment and legal regulatory barriers were the main challengesto the use of e-business technologies. The low standard deviation of most of the mean shows consistency in the respondents' responses against most of the factors.

Table 3.7: Distribution of SMEs according to constraints to use of e-business

Constraints	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean	SD	Rank
Network quality	168 (58.3)	88(30.6)	26 (9.0)	6 (2.1)	3.72*	3.46	1st
Lack of awareness of the technology perceived benefits	118 (41.0)	104 (36.1)	60 (20.8)	6 (2.1)	3.43*	3.50	2nd
Lack of expert staff	76 (26.4)	150 (52.1)	56 (19.4)	6 (2.1)	3.23*	2.60	3rd
Security issues	134 (46.5)	90 (31.3)	44 (15.3)	20 (6.9)	3.17*	0.93	4th
Cost of implementation	108 (37.5)	128 (44.4)	40 (13.9)	12 (4.2)	3.15*	0.81	5th
Concern for the cultural environment, and legal and regulatory barriers	80 (27.7)	120 (41.7)	68 (23.6)	20 (6.9)	3.11*	2.66	6th
Transportation and delivery	74 (25.7)	114 (39.6)	70 (24.3)	30 (10.4)	2.94	1.85	7th
Un-stability of government policy	92 (31.9)	108 (37.5)	60 (20 .8)	28 (9.7)	2.91	0.95	8th
Low use by customers and suppliers	68 (23.6)	134 (46.5)	74 (25.7)	12 (4.2)	2.89	0.80	9th
Limited spread of computers	78 (27.1)	110 (38.2)	88 (30.6)	12 (4.2)	2.88	0.85	10th
Lack of time for implementation	58 (20.1)	112 (38.9)	106 (36.8)	12 (4.2)	2.75	0.82	11th
Lack of external pressure	64 (22.2)	88 (30.6)	112 (38.9)	24 (8.3)	2.75	1.30	11th
Uncertain taxation rules	72 (25.0)	100 (34.7)	86 (29.9)	30 (10.4)	2.74	0.95	12th
Unsuitability for business	46 (16.0)	132 (45.8)	98 (34.0)	12 (4.2)	2.73	0.77	13th
Lack of online payment opportunities	60 (20.8)	100 (34.7)	94 (32.6)	34 (191.8)	2.64	0.94	14th
inadequate banking services	44 (15.3)	102 (35.4)	104 (36.1)	38 (13.2)	2.52	0.90	15th

Source: Field Survey, 2021; Gran Mean = 2.97; *Contributed ≥ Grand Mean; SD = Standard Deviation; figures in parenthesis are percentage while that outside are frequencies

The implication of this result is that although SMEs have integrated e-business in the business operation, this challenges continue to dissuade them from making major investments in e-business, hence many of the firms are still at the periphery of the application of e-business for their businesses.

The results of this study is well aligned with the reports of the authors in literature review. Al-Weshah & Al-Balqa (2012) categorized the constraints as technology, organizational and

environmental/external constraint factors. Security and issue of trust (Akkeren-Caraye, 2000), inadequate staff skill (Lawson, et al. 2003), lack of awareness of technology benefit (Lacovou, et al. 2005) amongst others were also discussed in the literature but mostly in the context of the developed economy.

It is deduced that if SMEs have not grown through e-business application, there is every chance that they will discontinue the use of e-business. In contrary, they have continued to hold onto the benefits which for them may have outweighed the cost of overcoming the constraints.

3.1.5.1 Hypothesis test III

Table 3.8 below shows the regression result of the hypothesis analysis for relationship between the factors that constrain the use of e-business and the contribution of e-business to the growth of SMEs.

The coefficient of determination (R^2) was approximated to 0.53 which implies that the factors examined by this test constitutes 53% constraints, in other words, reduces the contribution of e-business to the growth of SMEs. a negative R value of -0.729 also shows an inverse/negative relationship between the dependent variables (the contributions of e-business to SME growth) and the independent variables (the constraints to the use of e-business).

This implies that an increase in the number of constraints will result in reduction of the contribution of e-business to SME growth and vice-versa.

Judging by the R^2 value of 0.53, and P0.05=0.018, the null hypothesis is therefore rejected. This is to say that there is a negative and significant relationship between the constraints to the use of e-business and the contributions of e-business to the growth of SMEs.

In discussing business growth theory, Coad, (2009) outlined firm specific factors, industry specific factors and macro economy factors as determinant of business growth. This means that these factors must be seen in good light for growth to occur. Bottazi et al. (2006) underscores advertising intensity, while Coad, (2009) relates high technology industries with high growth. The implication for this hypothesis test is that where e-business technology use is hindered, in terms of any of the outlined factors in this test, advertising intensity, and technology savviness of the firm will not be in good light, and consequently firm do not grow. This implied by the negative relationship observed in this hypothesis result.

Table 3.8: Result of regression analysis of Hypothesis III "There is no significant relationship between the factors which constrain the use of e-business and the contribution of e-business to SME growth"

Independent variables	β-value	T-value	p-value
(Constant)	42.038	10.116	0.000
Security issues	1.124	1.323	0.018*
Cost of implementation	-0.688	-0.740	0.461
Network quality	-0.059	-0.300	0.050*
Lack of awareness of the technology perceived benefits	0.177	0.918	0.036*
Transportation and delivery	-0.077	-0.209	0.835
Limited diffusion of computers	0.729	0.837	0.404
Unsuitability for business	0.105	0.111	0.911
Lack of expert staff	0.333	1.309	0.039*
Lack of time for implementation	1.068	1.013	0.313
Low use by customers and suppliers	-0.046	-0.048	0.026*
Un-stability of government policy	0.298	0.350	0.727
Concern for the cultural environment, and legal and regulatory barriers	-0.424	-1.629	0.006*
Lack of online payment processes	-1.707	-1.754	0.082
Limited availability of banking services	3.293	3.310	0.001*
Uncertain taxation rules	0.074	0.074	0.941
Lack of external pressure	-0.143	-0.265	0.792

Source: Computed from Field Survey, 2021; R = -0.729; R^2 = 0.53; $F_{(16,127)}$ = 1.992; $P_{0.05}$ = 0.018; *significant at 0.05

SUMMARY AND CONCLUSION

Summary

The main aim of this study has been to examine the rising impact of e-business in emerging economies, a case study of Nigerian SMEs and their business growth. To arrive at its findings, the study asked has research questions; (i) What factors generally promote the adoption of e-business technologies? (ii) What factors generally constrain the adoption and implementation of e-business? (iii) How, on balance, does employment of e-business technologies contribute in Nigerian SMEs contribute to the growth of these SMEs? (iv) How and why may findings from this study generalize to e-business and SME growth in other countries than Nigeria? Three null hypotheses developed were; H_{01}: The application of e-business technologies by SMEs does not significantly affect the growth of SMEs, H_{02}: The promoters of business application do not significantly affect the growth through e-business application of SMEs, H_{03}: The constraints to e-business technologies does not significantly affect the growth through e-business application of SMEs.

Snowball technique was used to identify respondents, while Probability sampling techniques was used for sampling to select respondent for the study. Out of 400 SMEs identified who duly fit in for the survey, 300 were randomly selected using simple random technique. The structured questionnaire which contains a set of structured questions were designed using google form. The questionnaire was then sent out using emails and phone numbers of the selected respondents. Out of 300 selected respondents, 288 respondents completed and submitted the forms. The data was organized using SPSS (Statistical Package for Social Sciences), Likert type rating, percentages, charts, and tables were the descriptive statistical tools used for the study, while Ordinary Least Sqaure (OLS) Multiple Regression model was used to test the validity of the hypothesized statements.

Result on e-business application showed that e-business were mostly used for Providing product information to customers, Using internet to find out customers' needs and want, Online products update, Handling customers feedback/queries online, Using internet for anticipating customer needs, Displaying company information on website, Allowing a customer to contact a sales office, Achieving customer satisfaction through the electronic channel, Electronic Fund Transfer (EFT) and Online order entry and delivery. Result on the contribution of e-business to the growth of SMEs showed that

most SMEs who have used e-business have experienced growth in communication enhancement, information resource and knowledge sharing, expansion of market to reach people worldwide, improved process through new consumer customer contact, transportation and distribution, marketing research, and product design.

The result further showed that the most noticed factors that promote e-business lies in its ability to enable then reach new customers, its ability to improve customer relations and efficiency, owner/manager support, increased sales, and expansion of customer base. The most judged barriers to e-business use were poor network quality, lack of awareness of the technology perceived benefits, lack of expert staff, security issues, cost of implementation, and concern for cultural environment and legal regulatory barriers.

The null hypotheses test of relationship between the application of e-business and contribution of e-business to SME growth, between factors that promote the use of e-business and the contribution of e-business to SME growth, and the constraints to the use of e-business and contribution of e-business to SME growth were rejected. The regression result showed that application of e-business by SMEs in the business operations for displaying company information on website, online electronic brochures or buying guides, displaying a rage of product which are relevant to particular customer, online product update, handling customer feedbacks/queries online, online application and registration, personalized email communication amongst others has a significant and positive relationship with the contribution of e-business to SME growth. It also followed that owner/manager support, anticipated benefits, its ability to enable them reach new customers, pressure from trading partner, government support and initiatives, competitive pressure and reduction of cost were the e-business promoters whose presence significantly ($p<0.05$) encourage the use of e-business by SMEs.

The regression analysis however, showed a significant ($p<0.05$) but negative/inverse relationship between the e-business constraints and the contribution of e-business to the growth of SMEs. This showed that when the constraints are heightened, the contribution of e-business to SME growth lessens and vice-versa.

Conclusion

Generally, this study concludes that e-business holds lots of unexploited potential for so many SMEs that are yet to employ e-business technologies. These technologies have been useful in lifting many SMEs in this context to enviable levels even in the face of the mentioned challenges. Where the government or other external factors to the SME have not supported the employment of e-business technologies, many SMEs have successfully improvised strategies to surmount these challenges. Where e-business technologies are not made readily available and sufficient information to demonstrate to SMEs the benefits, via e.g. incentives such as free usage guide, quality network and security checks and balances are put in place, the employment of e-business by SMEs is yet to enjoy more application by these SMEs.

It is also interesting to note that beyond the positive impacts of e-business on SME performance as earlier discussed in this study based on previous researches, this study have established that more profitable ways to employ e-business are in a way that it helps the firms gain more wider presence virtually such as displaying company information on website, online electronic brochures or buying guides, displaying a rage of product which are relevant to particular customer etc. It is also good for investors to note that in as much as e-business is a game changer for SMEs, enablers such as owner manager support, pressure from trading partner, government support and initiatives are necessary factors for success while security concerns, and cost are challenges to be anticipated.

The systematic approach employed in this study not only provides satisfactory answer to the research questions of this study but raises ideas about further research about possibly generalizing the findings of this study to outside Nigeria into other contexts of emerging economy, or at least for comparative studies. Firstly, this study's methodological research choice of probability sampling is a very valid and reliable method for generating and analyzing empirical data. Secondly, this study has identified SMEs across the different geopolitical zones of Nigeria, providing research ideas about zooming in and/or zooming out. Thirdly, having obtained a justifiably and reasonably sample size for this study gives reason to propose that the result of this study may be generalizable for other locations which share similar circumstance (emerging economy). There is no guarantee however, that this finding will apply in the circumstance of the developed countries/economy as they do not share this business environment and external factors.

In sum, a research idea directly flowing from this study is to recommend future research focusing on studying how government policy initiatives can be tailored to encourage SMEs to adopt and use E-business. Not directly flowing from this study, but worthwhile research topic nonetheless, is to protect e-business from cyber fraud.

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APPENDICE

Appendix 1: Letter of informed consent

TALLINN UNIVERSITY OF TECHNOLOGY, TALLINN ESTONIA

The Chief Executive Officer

……. …………………………………………Company Limited

LAGOS NIGERIA

Dear Sir,

LETTER OF INFORMED CONSENT

We are pleased to inform you that you have been selected as a respondent in a study on rising impact of e**-business in emerging economies; a case study of Nigeria SMEs and their business growth**.

I am a student at **Tallinn University of Technology, Tallinn, Estonia**. The outcome of this study will be used for only academic purposes, specifically to write a course project work in **International Business Administration**.

A questionnaire is designed to collect information about your opinion regarding how your business organization is using Information and Communication Technology to conduct business and how it has contributed to the growth of your business.

I guarantee that your anonymity is fully assured and that your participation in this research is voluntary; and you have the right to withdraw at any point of the study, for any reason, and any corresponding information will be destroyed.

I would be grateful if you could complete the questionnaire attached to this letter, which will take about five minutes to do so.

Thank you.

Yours faithfully,

 Okonkwo, Chigozie Michael

(Project Researcher)

Appendix 2: Research questionnaire

RESEARCH QUESTIONNAIRE

Definition of term:

Electronic business (e-business) refers to the use of Information and Communication Technologies to transact business including sending, receiving and exchange of information, goods/services, and money. SMEs are business entities employing fifty (50) people but not less than 5 with capital outlay of five million (₦5m) or less (Pembi, 2016)

A. HOW E-BUSINESS IS APPLIED BY NIGERIAN SMEs

Which of the followings best describe the application of e-business by your company?

S/N	Applications	NUMBER IN YOUR ORDER OF IMPORTANCE as many that applies to you.
25.	Providing product information to customers	
26.	Displaying company information on website	
27.	Online electronic brochures or buying guides	
28.	Display only a range OF products which are relevant to the particular customer	
29.	Online help-frequently asked question	
30.	Online products update	
31.	Handling customers feedback/queries online	
32.	Online application/registration	
33.	Personalized email communication	
34.	Allowing a customer to contact a sales office	
35.	Share information with competitors, customers, and suppliers	
36.	Using internet to find out customers' needs and want	
37.	Using internet for anticipating customer needs	
38.	Achieving customer satisfaction through the electronic channel	
39.	Electronic Fund Transfer (EFT)	
40.	Online credit card processing	
41.	Electronic money	
42.	Smart and prepaid card	
43.	Coordinating procurement with suppliers online	
44.	On-line ordering of software products	
45.	Lower costs per business transaction	
46.	Tracking incoming and outgoing goods delivery	
47.	Online order entry and delivery	
48.	Electronic Data Interchange (EDI)	

B. HOW E-BUSINESS HAVE CONTRIBUTED TO THE GROWTH OF SMEs

Tick which of the statement is true on how e-business have contributed to the growth of your company since you adopted it.

S/N	Description	Very significantly (4)	Moderately (3)	Not significantly (2)	Not at all (1)
1.	Information, Resource, and knowledge sharing amongst trading partners				
2.	Task assigning among trading partners.				
3.	Training				
4.	Product design				
5.	Research development,				
6.	Export promotion,				
7.	Marketing research,				
8.	Transportation and distribution				
9.	Enhanced communication				
10	Improved processes through new consumer customer contact				
11	Increased consumer access at lower cost				
12	Reduces operational cost				
13	Expansion of market to reach people worldwide				
14	Easy and instant delivery of goods and services				
15	Provides variety				
16	Stimulating Competition				

C. FACTORS THAT PROMOTE THE ADOPTION OF E-BUSINESS IN AMONGST SME IN NIGERIA

Which of the following describes the reason why you adopt e-business technologies for your company?

S/N	Description	Strongly agree (4)	Disagree (3)	Disagree (2)	Strongly disagree (1)
1.	Owner/manager support				
2.	Increased sales,				
3.	Anticipated benefit				
4.	Its ability to enable them reach new customers				
5.	Employees' knowledge				
6.	Pressure from trading partners,				
7.	Pressure from customers.				
8.	Governmental support and incentives				
9.	Competitive pressure				
10	Government initiatives				
11	Its enables easy opening of new markets				
12	The reduction of costs,				
13	Its ability to improve customer relations and efficiency,				
14	Expansion of the customer base				
15	Time savings				
16	Others (please specify)				

D. CONSTRAINTS TO THE ADOPTION OF E-BUSINESS BY SMEs IN NIGERIA

Thick all that applies to you as a constraint to the adoption and use of e-business strategy in your company.

S/N	Description	Strongly agree (4)	Disagree (3)	Disagree (2)	Strongly disagree (1)
1.	security issues				
2.	costs of implementation				
3.	Network quality,				
4.	Lack of awareness of the technology perceived benefits				
5.	Transportation and delivery,				
6.	Limited diffusion of computers,				
7.	Unsuitability for business				
8.	Lack of expert staff				
9.	Lack of time for implementation				
10	Low use by customers and suppliers,				
11	Un-stability of government policy,				
12	Concern for the cultural environment, and legal and regulatory barriers.				
13	Lack of online payment processes				
14	Limited availability of banking services				
15	Uncertain taxation rules.				
16	Lack of external pressure				
17	Others (please specify)				

ORGANISATION'S CHARACTERISTICS

Please tell us briefly about your company.

Tick where applicable.

1. Where is your company based? _____

2. Does your company own a website? _____

3. What is the total number of employees? _____

4. How long has your business organization been in operation? _____

5. What is the nature of your business? (services/goods)

6. Where are your target customers located? (Thick as many that applies to you)

   [ ]   South Western Nigeria   [   ]   South Eastern Nigeria   [   ] South Southern Nigeria
   [   ]   North Central Nigeria [   ]   North Eastern Nigeria [   ]   North Western Nigeria.

7. How would you describe the business model in operated by your firm? [   ] Business to business
   (B2B)   [   ] Business to Consumer   [   ] Consumer to consumer

Thank you for taking time to complete this questionnaire.

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