Digital Adoption of SME in Nigeria: The Relationship with Business Performance

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ABSTRACT

In any business today, globally or locally, digitalization is inevitable. However, the study on digital adoption of the Nigerian small and medium enterprises (SMEs) and its relationship with business performance is scarce. Therefore, the aim of the study is to discover patterns within this relationship. From the literature review conducted, relationship existed between digital adoption and business performance. A research instrument was designed and items were adopted from various sources in the literature to test this relationship further. Digital Adoption was measured through Cloud computing, E-commerce, Mobile-commerce, Microblogging, and Company website. Meanwhile, measures of growth were utilised to gauge Business Performance. A total of 248 entrepreneurs from the state of Lagos, Nigeria participated in this survey. Demographic analysis, mean, standard deviation (SD), skewness, kurtosis, correlational analysis, and regression analysis were carried out. Results from the regression analysis conducted showed that digital adoption significantly and positively predicted business performance. This implicates on the importance of Nigerian SMEs in digitalizing their business for better performance.

Key Words*: Digital Adoption, Business Performance, Nigerian SMEs*

ABSTRAK

Dalam mana-mana perniagaan hari ini, di peringkat global atau tempatan, digitalisasi tidak dapat dielakkan. Walau bagaimanapun, kajian mengenai penggunaan digital perusahaan kecil dan sederhana (PKS) Nigeria dan hubungannya dengan prestasi perniagaan jarang dijalankan. Oleh itu, tujuan kajian adalah untuk mencari corak dalam hubungan ini. Dari tinjauan literatur yang dilakukan, terdapat hubungan antara penggunaan digital dan prestasi perniagaan. Instrumen kajian telah dirancang dan item-item diadopsi dari berbagai sumber dalam literatur untuk menguji hubungan ini lebih jauh. Digital Adoption diukur melalui pengkomputeran Cloud, E-commerce, Mobile-commerce, Microblogging, dan laman web Syarikat. Sementara itu, ukuran

pertumbuhan digunakan untuk mengukur Prestasi Perniagaan. Seramai 248 usahawan dari negeri Lagos, Nigeria mengambil bahagian dalam tinjauan ini. Analisis demografi, min, sisihan piawai (SD), skewness, kurtosis, analisis korelasi, dan analisis regresi dilakukan. Hasil dari analisis regresi yang dilakukan menunjukkan bahawa penggunaan digital meramalkan prestasi perniagaan secara signifikan dan positif ($\beta = 0.139$, $p < 0.05$). Ini menunjukkan pentingnya PKS Nigeria dalam mendigitalkan perniagaan mereka untuk prestasi yang lebih baik.

Kata Kunci: *Penerapan Digital, Prestasi Perniagaan, PKS Nigeria*

INTRODUCTION

Digital adoption (DA) is a phenomenon that is fast becoming a substantive force in almost every modern business setting on the African continent and across the world. It is swiftly changing the way individuals interact and conduct their businesses. There were arguments that the consequence of globalization has inspired various Small and Medium Enterprises (SME's) to adopt digital technologies so as to survive the present-day competitiveness and aid business performance (Ongori & Migiro, 2010). A similar view by (Nickerson, 1981) and (Mathieson, 1991) contended that although digital systems has the capacity to boost business performance but also at times users are reluctant to adopt the systems due to complexity. Even with the fact, it is widely acknowledged that embracing digital technologies into business process have the potential of generating tremendous new wealth, one would expect digital business issues to constantly entice business and entrepreneurship researchers, yet there is a minor extent to which African scholars have explored this capacity, leaving the continent languishing. The key reasons for less attention by researchers are probably attributed to the constant change of digital technology and its applications, digital-divide, platform to carry out extensive research and most likely the finance required to reach target audience in far distance locations. Also, academic research on employee engagement is currently sparse in the country. Only few literatures to date has articulated its unique features and developed theories that attract the attention of future researcher in this domain.

However, according to the research work of (Kuyoro et al., 2013) highlights future in-depth empirical research and multiple variables that determines business performance and sustainability in the developing economy context. As the region is still at the level where attention of researchers is needed, it is necessary to continuously compare results to previous findings so as to monitor the success rate until they are on par with their western counterpart. According to many and different journals related to this domain, majority of these journals have something synonymous, variables were limited and samples were relatively small, hence in determining the link connecting digital adoptions, and business performance remains a source of debate. From these perspectives, the researcher has inferred there is a room for a large variety of study. As a result of the limited studies on the concept of digital adoption and business performance, more empirical evidences are required, specifically in the Nigerian context. Hence, the research objective is to investigate the relationship between digital adoption and business performance of SME's in Nigeria.

LITERATURE REVIEW

Definition of Small and Medium Enterprises (SMEs)

Studies did not point to a specific and agreed definition of the term "small and medium enterprises'', however, in most cases definition is characterized by industry or country. This is in accordance with PricewaterhouseCoopers (2009), that the definition of SME's varies with jurisdiction. As Holt (2009) noted, a single definition cannot be applied in a situation where there are differences in level of development, sectors, firms, countries etc. Most importantly definition should be based on countries amount of development, contribution to economy and government policies (Reuben, Grace & Michael, 2014).

The Small and Medium Enterprises Development Agency of Nigeria" (SMEDAN, 2012), defined "Micro Small and Medium Enterprises" as follows:

- Micro enterprises: an enterprise that employs between 1 to 9 workers and have ₦1 to ₦5million as capital base which excludes the cost of land.
- Small enterprises: companies employing between 10 to 49 workers and having ₦5million to ₦50million as capital base.
- Medium enterprises: any company which employs between 50 to 199 workers and have ₦50million to ₦500million as capital base.

Impact of SMEs Performance in the Nigerian Economy

The rate of SMEs and its effect on the Nigerian economy is notably indistinguishable with some developing and advance countries. The SMEs in Nigeria play a major and crucial role in developing the economy, especially in the manufacturing sectors. Studies carried out by the "Federal Office of Statistics" indicates that 97% of Nigerian enterprises employ less than 100 workers. According to Ariyo (2008), the SME sector, on average, provides "50% of the employment and 50% of the industrial output" in Nigeria. Oyelaran-Oyeyinka (2012) and Frimpong (2013) also affirm that SMEs in the manufacturing sector provides more than 90% employment opportunities and account for approximately 70% of Nigeria's aggregate employment created annually. Nigeria SMEs are seen as entrepreneurs' ingenuity in utilizing the bountiful non-oil, natural resources of Nigeria which provides a springboard and sustainable platform for "economic growth and industrial development" as in the case of the economically developed and industrialized societies (Ebiringa, 2011; Schmiemann, 2008).

In 2012, The Federal bureau of Statistics (FBS) conducted a survey across Nigeria and the analysis showed that the country has a total of 17.28million SMEs and 17.26million are regarded as micro-enterprises valued below ₦5million (This Day Newspaper, 2012). According to the survey, "Lagos State had the largest number of SMEs in Nigeria with 17% of the national figure, closely followed by Kano State, while Osun State has the least number of SMEs with just 0.4% of the national figure".

Problems of Small and Medium Scale Enterprises (SMEs) in Nigeria

The Nigerian SMEs are plagued with several problems. A recent survey of MSMEs by the "National Bureau of Statistics" (NBS) revealed that 73.24% of the most important assistance required by MSMEs administrators is funding. Additionally, just 4.2% of 17.2million MSMEs have the ability to attract loans from financial institutions, while start-ups or new entrants have difficulties in accessing bank loans (SMEDAN OLOP Report, 2014). The available amount of fund for investment and channels for financing SMEs are usually insufficient and inadequate. The enterprise may utilize personal savings, contributions or borrowing from colleagues. This is hardly sufficient, hence, the enterprise turns to financial and allied institutions to borrow funds. Collaterals are usually demanded by financial institutions, along with inflexible conditions to be met before loans is granted to any individual or organization. Essien (2006) affirms that financial institutions, specifically banks operate under strict rules that rarely benefit the fresh small-scale businesses. Generally, banks require legal and financial documentations along with acceptable collaterals before lending funds. A lot has been done by Government to guarantee the proper financing of small scale businesses through the establishment of loan schemes, "Agricultural Banks, Industry and Commerce Banks", and in recent times, Community Banks are being revamped to Micro-Finance Banks in order so as to enlarge monetary supports and make finances readily available to SMEs in Nigeria.

Digital Adoption (DA)

Digitalisation as a concept is not an odd movement. It is a continuing process which does not have a closure in a conventional sense and is sustained by an advancing computing power (Vogelsang, 2010; Evans et al, 2006). Digitalisation, according to Gassmann et al (2014), is the act of turning existing products or services into digital variation, and hence, provides advantages over concrete products, for example, simpler and speedy distribution. In essence, digitalisation simply means the technical element of the changeover from analogue to digital (Yoo, 2010). Nonetheless, digitalisation concept goes further and depict the usage of digital innovations and technologies to intensify, for example, business models and internal processes. Organisations using new digital solutions and IT innovations are said to have mature digitally. Since various studies and papers contend in favour of digitalisation that its maturity is positively related to ensuing operating performance. Additionally, as a widespread concept, digitalisation cannot be simply characterised as a single item as it is an ongoing process.

Jung et al., (2001); Livingstone and Helsper (2007), posit that, it is now advancing towards comprehending different manners of engaging with ICTs. Hence, the concept of digital adoption refers to integration or participation in different innovation technologies, contents, internets and platforms with the intention to improve business activities.

Digital infrastructure in Nigeria is in amazement that at a time when every single lip sings the importance of digitalization, mobile and web technologies, the country still suffers from huge digital infrastructure deficit. The government does not have a proper framework to help charge the evolution of a new tech industry. The few tech success stories swirling in the country are credited to hard-fighting private individuals who have exploited the internet technology and build framework to shape the development of new ideas.

It cannot be said that people are impressed with the current state of its technological development given the rich and potentials that it proudly boasts as the giant of Africa, but surprisingly home-grown technology ecosystem has been given less attention. Ways to accelerate Nigeria lies in a genuine solution that may translate to aggressive technological approach. Silicon Valley is identical to the United States and so far, several other countries have, in fact attempt to replicate the exact success. Some have resort to names such as Santiago's Chilecon Valley, Silicon Wadi in Tel Aviv, Israel, Germany's Silicon Allee, and others just to create their own Silicon Valley.

Business Performance (BP)

Business is seen as a type of design for product, service and information flow containing a depiction of diverse business representatives, their functions, the probable advantages of each of the agents and their source of income (Hadi & Ebrahimpour, 2014). It is wrongly believed by many that the performance of an organisation equals its profitability, rather, an organisation's performance is assessed based on the organisation's type, mission, philosophy, management thoughts, environmental conditions, amongst others (Hadi & Ebrahimpour, 2014).

Lebans and Euske (2006) and Kaplan and Norton (1993) provide the concept of performance to constitute both monetary and non-monetary gauge that provides details on the amount of success of goals and outcomes. However, in Olusola (2011) opinion, performance is the ability to evaluate success level of a business organization. Owing to these definitions, small and medium organizations performance may well be evaluated in terms of innovativeness, firm size, strength of working capital, employee commitment, profitability, efficiency and so on. Innovativeness here is better described as the organization's willingness to adopt innovation, may perhaps be launching of up-to-date products, services, new ideas or process. These capacities to invent and adjust to current technological trends remain vital influential factors of performance (Hurley & Hult, 1998; Burns & Stalker, 1961; Schumpeter, 1934; Porter, 1990).

The competitive advantage of an organisation can improve through various factors which include industry components or micro-environmental factors (such as new and existing competition within the industry, substitute goods, customers, suppliers and consumers), macro-environmental factors which include local and international (such as political, sociocultural, economic, and technological factors) and factors relating to the internal aspect of the organisation (both intangible and tangible assets and skills).

Relationship between Digital Adoption and Business Performance

The assumption that using digital technologies to support business operations ensures a specific influence on business performance has garnered supports from empirical studies and academics across the globe. The outcomes of these studies continuously exhibit strong correlation technology has over business performance. Technology tools such as e-commerce, firm's own website, cloud computing, mobile commerce and microblogging site (social media) have all been proven to significantly impact on the performance of organization (Majumdar et al., 2010; Ghobakhloo, 2011; Xia & Zhang, 2010; Grimes et al., 2012; Bertschek et al., 2013; Liu et al. 2013; Haller & Lyons, 2015; Hagsten, 2016). Also, there is a confirmation of significant

influence of ICT on performance in the aspect of profit, market value, branding and productivity (Ashrafi & Murtaza, 2008; Ritchie & Bringdley, 2005; Love et al., 2004; Baldwin & Gellatly, 2003; Brynjolfsson & Yang, 1996). Numerous researches in operation found that coordination and sharing of information through IT can generate high level of operational and financial performance (De Mattos & Laurindo, 2015; Nurk, 2019; Sarite et al, 2018;).

METHODOLOGY

For this research, a descriptive approach was utilised as the research aims to determine the connection between digital adoption and business performance. The research method utilized in this research is a cause and effect study. It is well known study design in social science as it investigates whether connection exist between variable X and Y outcome. The researcher adopted these designs based on its relevance to current study. Also, cross-sectional study would be applied whereby the intent of the research is descriptive, usually in the form of survey. As Babbie (2013) noted "survey is perhaps the best method available to social researcher who is interested in collecting original data for describing a population enormous to nuswcv opulation". The methodology is also considered a feasible way to test hypotheses, depict populations, generate measurement scales, and establish theoretical models in research beyond a wide selection of fields (Lee & Shim, 2007).

Thus, a survey method is utilised in this research, in the mode of self-administered questionnaire in gathering the data needed from certain respondents as it was challenging to collect data from a large sample range by reason of time and money constraints.

Digital adoption would be measured by the five listed DA components (Cloud computing, E-commerce, Mobile-commerce, Microblogging, and Company website). Moreover, each of these components has been used in previous studies to define dimensions of technology. Cloud computing consist of 5 items adopted from Bayramusta and Nasir (2016), E-commerce 5 items (Adegbuyi et al, 2015), Mobile commerce 5 items (Alshboul, 2014), Micro blogging 5 items (Jurado et al, 2018) and Company website 5 items (Kwayu et al, 2017), such to provide more balancing to the nature and objective of this work. Some example of items include: *" Our company back-up are stored in the cloud technology", "Most effective way to track customer and supplier's progress", "Mobile/smart phone is easy to access from any location", "Easier and faster means to build customers relationship",* and *"We use our company website to share product and service information".*

With regard to small and medium business performance, the researcher takes into account the measures of profitability (2 items), efficiency (3 items) and sales & growth (3 items). In prior researches, growth is used as a measure for "business performance" (Tsai et al., 1991; Brush & VanderWerf, 1992; Fombrun & Wally, 1989; Chandler & Hanks, 1993). In order to evaluate the result of each item above, the researcher would be using the Likert scale which ranges from "strongly disagree (1) to strongly agree (5)". Some examples of items used are: *"By adopting technology, my organization have recorded more profit", "By adopting technology, my organization have recorded strong sales",* and *"Using technology, your organization have reported products or services efficiency"*.

The participants in this study consist of "small and medium business owners or managers" within the Ikeja business district of Lagos State, Nigeria. The reason for selecting this area is attributed to its unrivalled economic importance across the country, it's the social and economic of hub of Nigeria and most importantly the ease of distribution and collection of survey was considered. The samples are selected using a random technique. A random technique was decided because of its highly representative of population. To reduce the numbers of non-respondents, the researcher has included technique such as mailing, telephone and letters. The total population of SMEs in Ikeja, Lagos selected for this study is 700. However, the targeted sample size for this study is 248. These calculations were dependent on the Krejcie and Morgan's sample size calculation.

Primary data collected through questionnaire designed meet the objective of this study, will be analysed through the use of SPSS statistical program.

EMPIRICAL RESULTS

Demographic Analysis

In this research work, there are a total of 157 (63.31%) male respondents and 91 (36.69%) female respondents. This indicates that greater number of the respondents in Lagos were male. Majority of the respondents in this study were from the age group 31-40 years with 91 respondents (36.69%), followed by age group 41-50 years, with 66 respondents depicting 26.61% of the study. The minority among the respondents were from the age groups 51-60 years, <30 years and above 60 years, with 50, 24 and 17 respondents, representing 20.16%, 9.68% and 6.85% respectively. For this study, 116 respondents were married, 83 were single respondents, 33 respondents were divorced while 16 respondents were widowed, representing 46.8%, 33.5%, 13.3%, and 6.5% respectively. Greater number of the respondents were Bachelor's Degree holders with 125 (50.4%) respondents participating in the study. This is followed by Post Graduate degree holders with 58 respondents depicting 23.4% of respondents in this study. The third rank in line were respondents with Diploma certificate with 41 respondents (16.5%). The minority of the respondents are high school certificate holders with 24 respondents (9.7 %). Greater number of the respondents have been working in their current position for 6-10 years were 99 (39.9%), followed by those with 3-5 years of experience with 83 respondents (33.5%). The minority have only worked for 1-2 years with 66 respondents (26.6%). The minority were employees with 58 respondents (23.4%). Greater number of the respondents were business owners with 107 respondents (43.1%), followed by managers with 83 respondents (33.5%). Greater number of the respondents have small business comprising 11-49 employees with 132 respondents (53.2%), followed by those with medium business having 49-199 employees with 75 respondents (30.2%). The minority fall in the micro business having 1-10 employees with 41 respondents (16.5%).

Reliability Analysis

Cronbach's Alpha for Digital Adoption (DA) and Business performance (BP) are 0.948, and 0.937 respectively. This signifies that the internal consistency level is high for the scale.

Descriptive Statistic

In the descriptive statistics, the mean, standard deviation (SD), skewness, and kurtosis were measured for each variable. The mean analysis showed that both variables: DA and BP were moderate. DA mean level was at 3.96 and BP was 3.18 out of 5. The threshold for SD is plus minus 2 to indicate that the results are closest to the true value. In this study, both variables showed low standard deviation i.e. DA is at 0.552 and BP is at 1.363. Skewness and kurtosis of less than 3.0 will indicate normal distribution. For DA, its skewness and kurtosis are at – 0.253 and – 0.566. Meanwhile, the skewness and kurtosis for BP are at – 0.236 and – 1.159, respectively. Therefore, the results from skewness and kurtosis showed indicated that both variables are normally distributed.

Correlational Analysis

The connection between two variables (bivariate) is depicted by correlation analysis. The connection between DA and BP is positive and significant $r = 0.139$, $p < 0.05$.

Regression Analysis

Results indicated that digital adoption (DA) has a constructive and significant effect on Business Performance (BP). The table depicts that the questionnaire statements utilised in testing Digital adoption and Business Performance have a very high and favourable relationship with the use of regression analysis in as shown in the table, the outcome signifies that contribution exist ($\beta = 0.139$, $p < 0.05$) and digital adoption is the independent variable. Consequently, the tables show that there is a significant and positive relationship between digital adoption and Business Performance which means that digital adoption has a positive influence on Business performance. The details of the results are depicted in TABLE 1.

TABLE 1: Regression analysis of Business Performance on Digital Adoption

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	β	T	Sig.
1	(Constant)	1.830	0.621		2.946	0.004
	Digital Adoption	0.342	0.156	0.139	2.197	0.029
	R	0.139				
	R^2	0.019				
	F	4.828**				

** Significant at 0.01 level; * significant at 0.05 level

CONCLUSION

This research establishes the positive connection between digital adoption and business performance. This helps in confirming the critical role of digitalisation in firm's performance and growth. The findings confirm past researches, which have endorsed a positive connection between technological factors and successful innovation, resulting in greater performance and business growth.

In various studies, such as Majumdar et al., (2010); Ghobakhloo, (2011); Xia & Zhang, (2010); Grimes et al., (2012); Bertschek etal., (2013); Liu et al. (2013); Haller & Lyons, (2015); Hagsten, (2016)., digital adoption was found to have a positive effect on business performance. The result acquired in this study is in similarity with the findings of past studies where digital adoption is positively related to business performance. The ability of an organisation to utilise, enhance and develop technological competence is essential (Bharadwaj, 2000). The success of any organisation is in the ability of handling various tasks through a well-organised system with the assistance of technological infrastructure flexibleness (Byrd & Turner, 2001) which helps in effectively reducing production cost and enhance organisational performance (Jacks et al., 2011). This study will enhance the business performance and technological literatures for the developing countries, more particularly for Nigeria. SMEs in Nigeria must be able to practise digitalisation strategies to improve their business performance. The finding aids in analysing how the level of digital adoption can affect the level of performance of the SME. Thus, managers should comprehend that having applicable structures, procedures, policies, and systems in place will help to enhance digital adoption which, ultimately, will result in achieving business goals.

Majority of research, notwithstanding how well they are conducted, encounter certain limitations. Nevertheless, these limitations are considered appropriate as they provide direction for future research. One of the limitations is that this study selected the owners, managers and owners from SMEs as the focal point of emphasis in conducting the study. Other researchers desiring to study this same topic may select owners and workforce from other sectors to conduct their research on.

Additionally, other variables can be utilised to help develop and comprehend the interpreted variance in business performance subjected to the researchers' interest and recommendations from previous researches. investigators are also supported to conduct a comparative analysis utilising the model developed in this study and preceding models affiliated with business performance in an effort to attain the model best suiting the specifications of the specific organisation, industry, and/or country where the research is conducted.

REFERENCES

Adegbuyi, O.A., Akinyele, F.A. & Akinyele, S.T. (2015), The effect of social media marketing on small scale business performance in Ota-Metropolis, Nigeria. *International Journal of Social Sciences Management, 2(3),* 275 – 283.

Alshboul, A. (2014), Mobile Commerce: Business Intelligence and the Impact of its Performance on Managerial Decision Making. *International Journal of Applied Science and Technology, 4(4),* 282 – 291.

Ariyo, D. (2008). Small firms are the backbone of the Nigerian economy, Africa economic analysis, *Academy of Management Journal, 1(1),* 109 – 124.

Ashrafi, R. & Murtaza, M. (2008). Use and Impact of ICT on SMEs in OMAN. *The Electronic Journal of Information Systems Evaluation, 11,* 125 – 138.

Babbie, E. (2013). *The practice of social research. 13th ed.* Belmont, Calif.: Wadsworth Cengage Learning.

Baldwin, J.R. & Gellatly, G. (2003). *Innovation Strategies and Performance in Small Firms.*USA: Edward Edgar Publishing Limited.

Bayramusta, M., & Nasir, V. A. (2016). A fad or future of it? A comprehensive literature review on the cloud computing research. *International Journal of Information Management, 36(4),* 635–644.

Berthschek, I., Cerquera, D. & Klein, G.J. (2013). More bits – more bucks? Measuring the impact of broadband internet on firm performance. *Information Economics and Policy, 25(3),* 190 – 203.

Bharadwaj, A. (2000). A resource-based perspective on information technology capability and firm performance: an empirical investigation. *MIS Quarterly, 24(1),* 169-196.

Burns, T. & Stalker, G.M. (1961). *The Management of Innovation.* London: Tavistock Publications.

Brush, C.G. & Vanderwerf, P.A. (1992). A Comparison of methods and sources for obtaining estimates of new venture performance, *Journal of Business Venturing, 7(2),* 157 – 170.

Brynjolfsson, E. & Yang, S. (1996). Information Technology and Productivity: A Review of the literature. In M. Zelkowitz ed., *Advances in Computers, Vol. 43.*

Byrd, T.A., & Turner, D. (2001). An exploratory examination of the relationship between flexible IT infrastructure and competitive advantage. *Information & Management, 39(1),* 41-52.

Chandler, G.N. & Hanks, S.H. (1993). Measuring the performance of emerging businesses: A validation study, *Journal of Business Venturing, 8(5),* 391 – 408.

De Mattos, C.A. & Laurindo, F.J.B. (2015), Collaborative Platforms for Supply Chain Integration: Trajectory, Assimilation of Platforms and Results. *Journal of Technology Management & Innovation, 10(1),* 79 – 92.

Ebiringa, O.T. (2011). Synthesis of Literature on Small and Medium Enterprises Start-up Financing. *International Journal of Economic Research, 2(1),* 85 – 95.

Essien, E. E. (2006). *Entrepreneurship: Concept and Practice.* Uyo: Abaam Publishing Company.

Evans, D.S., Hagiu, A., & Schmalensee, R. (2006). *Invisible Engines: How Software Platforms Drive Innovation and Transform Industries.* The MIT Press, Cambridge, Massachusetts.

Fombrun, C.J. & Wally, S. (1989). Structuring small firms for rapid growth. *Journal of Business Venturing, 4(2),* 107 – 122.

Frimpong, C.Y. (2013). SMEs as an engine of social and economic growth in Africa, modern Ghana featured Article, 29 July. In Ntiamoah, E.B, Li, D. & Kwamega, M (2016), *Impact of government and other institutions' support on performance of small and medium enterprises in the agribusiness sector in Ghana*. American Journal of Industrial and Business Management, 6(5).

Gassmann, O., Frankenberger, K., & Csik, M. (2014). *The St. Gallen Business Model Navigator*. Working Paper University of St. Gallen, pages 5–12.

Ghobakhloo, M., Arias-Aranda, D. & Benitez-Amado, J. (2011). Adoption of E-Commerce Applications in SMEs. *Industrial Management & Data Systems, 111(8).*

Grimes, A., Ren, C. & Stevens, P. (2012). The need for speed: impacts of internet connectivity on firm productivity. *Journal of Productivity Analysis, 37(2),* 187 – 201.

Hadi, F. & Ebrahimpour, (2014). Investigating the relationship between technology intelligence and business performance. *Singaporean Journal of Business Economics, and Management Studies 2(11),* 207 – 215.

Haller, S. & Lyons, S. (2015). Broadband Adoption and Firm Productivity: Evidence from Irish Manufacturing Firms. *Telecommunications Policy, 39(1),* 1 – 13.

Holt, G. (2009). *IFRS for SMEs*. Retrieved from: http://www.ifrs.org

Hurley, R.F., Hult, M.T.M (1998). Innovation, market orientation, and organisational learning: An Integration and Empirical Examination. *Journal of Marketing, 62(3),* 42-54.

Jung, J.Y., Qui, J.L. & Kim Y.C. (2001). Internet connectedness and inequality: Beyond the "divide". *Communication Research, 28(4),* 507 – 535.

Jurado, E. B., Moral, A.M. Viruel, M.J.M. & Ucles, F.D. (2018), Evaluation of Corporate Websites and their influence on the performance companies. *Sustainability, 10(4),* 1 – 11.

Kaplan, R.S. & Norton, D.P. (1993). Putting the Balanced Scorecard to Work. *Harvard Business Review,* 134 – 147.

Kuyoro, S., Awodele, O., Alao, O.D., & Omotunde, A.A. (2013). ICT solution to small and medium scale enterprises (SMEs) in Nigeria. *International Journal of Computer and Information Technology, 2(4),* 785-789.

Kwayu, S., Lal, B. & Abubakre, M. (2017), Enhancing Organisational Competitiveness Via Social Media – a Strategy as Practice Perspective. *Information Systems Frontiers, 20,* 439 – 456.

Hagsten, E. (2016). Broadband connected employees and labour productivity: A comparative analysis of 14 European countries based on distributed Microdata access. *Economics of Innovation and New Technology,* 1 – 7.

Haller, S. & Lyons, S. (2015). Broadband Adoption and Firm Productivity: Evidence from Irish Manufacturing Firms. *Telecommunications Policy, 39(1),* 1 – 13.

Lebans, M. & Euske, K. (2006). *A conceptual and operational delineation of performance.* Business Performance Measurement: Cambridge University Press.

Lee, C. & Shim, J. (2007). An exploratory study of radio frequency identification (RFID) adoption in the healthcare industry. *European Journal of Information Systems, 16(6),* 712 – 724.

Liu, H., Ke, W., Wei, K.K. & Hua, Z. (2013). Effects of supply chain integration and market orientation on firm performance: Evidence from China. *International Journal of Operations & Production Management, 33(3),* 322 – 346.

Livingstone, S. & Helsper, E. (2007). Gradations in digital inclusion: children, young people and the digital divide. *New Media & Society, 9(4),* 671-696.

Love, P., Irani, Z. & Edwards, D. (2004). A Rework Reduction Model for Construction Projects. *IEEE Transactions on Engineering Management, 51(4),* 426 – 440.

Majumdar, S.K., Moussawi, R. & Yaylacicegi, U. (2010). Mergers, Jobs and wages in the United States Telecommunications industry. *Human Relations, 63(10),* 1611 – 1636.

Mathieson, K. (1991). Predicting User Intentions: Comparing the technology Acceptance Model with the theory of Planned Behaviour. *Information Systems Research, 2(3),* 173 – 191.

Nickerson, R.S. (1981). Why interactive Computer Systems are sometimes not used by people who might benefit from them. *International Journal of Man-Machine Studies, 15,* 469-483.

Nurk, J. (2019), Smart Information System Capabilities of Digital Supply Chain Business Models. *European Journal of Business Science and Technology, 5(2),* 143 – 184.

Olusola, O.A. (2011). Accounting Skill as a performance Factor for small businesses in Nigeria. *Journal of Emerging Trends in Economics and Management Science, 2(5),* 372 – 378.

Ongori, H. & Migiro, S. (2010). Information and Communication Technologies adoption in SMEs: Literature Review. *Journal of Chinese Entrepreneurship, 2(1),* 93-104.

Oyelaran-Oyeyinka, B. (2012). SMEs: *Issues, challenges and prospects.* International Conference on Financial System Strategy 2020, United Nations, Retrieved from http://cenbank.org/fss/wed/SME_Issues_Challenges and_Prospects_Oyeyinka_Banji,pdf.

Porter, M. E. (1990). *The Competitive Advantage of Nations.* New York: Free Press, MacMillan.

PricewaterhouseCoopers (2009). IFRS for small and medium-sized entities. Pocket Guide 2009, Retrieved from http://www.pwc.com.

Reuben, U. E, Grace, R. E, & Michael, B. (2014). Small and medium scale enterprises (SMEs) and Nigeria's Economic Development. *Mediterranean Journal of Social Sciences, 5(7).*

Ritchie, B. & Bringdley, C. (2005). ICT Adoption in SMEs: Implications for Relationships and Management. *New Technology, Work & Employment, 20(3),* 205 – 217.

Sarite, S.K., Iravo, M.K. & Ismail, N. (2018), Role of Technological Integration in Supply Chain Collaboration on Performance of Manufacturing Firms in Kenya. *European Journal of Logistics, Purchasing and Supply Chain Management, 6(1),* 1 – 2.

Schmiemann, M. (2008). Enterprises by size and class: Overview of SMEs in the EU. *Statistics in focus, No. 31,* Luxembourg: Eurostat.

Schumpeter, J. (1934). *The theory of economic development.* Cambridge, MA: Harvard University Press.

SMEDAN (2012). *Survey Report on Micro, Small and Medium Enterprises (MSMEs) in Nigeria.* 2010 National survey.

SMEDAN OLOP Report (2014). *Guide to NEDEP on OLOP Opportunities in Nigeria Volume 1.* February, 2014.

This Day Newspaper online. (2012*). FG Releases First National Survey on SMEs Survey shows 99 per cent of firms are micro enterprises. This Day Live.* Retrieved from http://www.thisdaylive.com/articles/fg-releases-first-national-survey-on-smes-survey-shows-99-per-cen t-of-firms-are-micro-enterprises/120425/

Tsai, W., Macmillan, I.C. & Low, M.B. (1991). Effects of Strategy and Environment on Corporate Venture Success in Industrial Markets. *Journal of Business Venturing, 6(1),* 9 – 28.

Vogelsang, M. (2010). *Digitalization in Open Economies.* Springer-Verlag: Berlin Heidelberg.

Xia, Y. & Zhang, P.G. (2010). The Impact of the Online Channel on Retailers' Performances: An Empirical Evaluation. *Decision Sciences, 41(3),* 517 – 546.

Yoo, Y. (2010). Computing in everyday life: A call for research on experiential computing. *MIS Quarterly, 34(2),* 213–231.