DIGITIZATION OF INSURANCE VALUE CHAIN FOR COMPETITIVE ADVANTAGE IN NIGERIA: MODERATING ROLE OF FINANCIAL RESOURCE CAPABILITY

By

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Abstract
This study examines the digitization of insurance value chain for competitive advantage in Nigeria and also attempts to determine if the relationship between digital insuring and competitive advantage can be moderated by financial resource capability. Given the low level of awareness, investment and adoption of digital technology for insurance business in Nigeria, it is, therefore, not surprising that the sector remains grossly underperforming and underdeveloped contributing a meagre 0.1 percent to the nation's GDP. With brick-and-mortar insuring still in vogue in the Nigerian insurance sector, the quest for competitive advantage can only be a mirage while the industry may continue to lose lucrative businesses to the more focused, better capitalized and digitally transformed foreign competitors. The digital revolution that has taken over the conduct of business in every industry, including insurance is, perhaps, yet to be appreciated by Nigerian insurers. Consequently, the sector lags behind its foreign peers in the adoption and deployment of such digital technology tools like cloud computing, artificial intelligence, blockchain, Internet of Things, Big Data, telematics and drones technology for conducting insurance business. This research is a quantitative design that utilises the cross sectional survey strategy. It is anchored on a philosophical foundation of positivism and ontological orientation of objectivism. 20 insurance firms were sampled for the study using the stratified sampling technique. 280 questionnaires were distributed to the 20 sampled companies out of which 250 were returned and found usable for the study. Data was analysed using the Andy Hayes Process v3.3 for regression. Findings from the research revealed that a positive and statistically significant relationship exists between digital insuring and competitive advantage but the relationship between them is not significantly moderated by financial resource capability in the Nigerian insurance industry.
Keywords: *Digitization, insurance, competitive advantage, technology, moderation.*

1.0 Introduction

The Nigerian insurance industry has witnessed a rather slow process of digitization over the years leading to low frequency of interaction between the insurers and the insured. The prevailing customer touchpoints do not create opportunities for gaining insights into customer needs and customized products. The digital revolution has come to address this challenge by creating numerous customer touchpoints that can enable a firm gain competitive advantage through digital insuring (Swiss-Re, 2020).

Conducting insurance business with traditional methods with very little knowledge and interaction with customers will soon become obsolete because the millennial (Generation Y) with very early exposure to digital technology and innovative platforms abhor the old ways of doing things. These 'digital natives' of our time have a huge purchasing power that cannot be ignored by insurance companies and must, therefore, desist from the present brick-and-mortar ways of conducting business in order to attract them into the insurance net. A plethora of breakthrough technologies are spurring fundamental transformations in the global insurance industry. Cloud computing, Internet of Things (IoTs), advanced analytics, blockchain, telematics, drones technology, artificial intelligence (AI), mobile phone technology, robotics, global positioning system (GPS), and digital platforms are providing new ways to measure, control, analyse and price risks, reduce costs, improve customer service delivery, improve efficiency and expand the market with creative new products (Deloitte, 2017; Ehiorobo, 2020; Swiss-Re, 2020). In today's world of digital insuring, start-ups are using technology to reduce operational costs and enhancing customer experience by leapfrogging convenience, transparency, timeliness, simplicity, personalization and customer engagement.

Digital disruptors are making inroads in the global insurance market that is estimated to be worth $4.5 trillion (Swiss-re, 2016) by leveraging on shifts in client demographics, behaviour and expectations to provide better, faster and customer-oriented services. These new digital players pose a significant competitive challenge to traditional insurers as their low-cost technology and digitally-oriented business models help them compete asymmetrically by targeting specific areas of the insurance value chain. With growing on-demand insurance, smart homes and property insurance, wearables and sensors for monitoring health, telematics for verifying driving habits and accidents, drones for monitoring natural disasters, the deployment of advanced technology in the insurance sector has become a basic necessity for gaining competitive advantage.

Competitive advantage arises when a firm is able to offer better value to its customers at a cost that is significantly lower than what competitors do (Tanwar, 2013). New start-ups leveraging on insuretech are creating cheaper, faster, convenient and personalized insurance services to their clients. They apply digital technology to every node of the value chain which is compatible with the tastes and preferences of the digitally aware customers and this is boosting their steady growth and, perhaps, competitive advantage over their traditional rivals. As the global insurance industry gradually moves away from the brick-and-mortar insuring, the Nigerian insurance sector remains docile while watching rapid digital transformation from a distance. The poor level of industry capitalization, absence of skilled personnel, lack of strategic focus and low adoption of modern technology may combine to make the Nigerian insurance industry a poor performer at the domestic market and a toddler in global insurance industry and thus, may continue to lose lucrative insurance businesses to foreign insurers.

1.1 Statement of the Problem

The digitalization of business has become the major arena for competitive rivalry in every industry, including insurance. Consequently, many insurance companies, especially in developed countries, seek collaboration either through partnership or outright acquisition of insuretech start-up firms and leverage on their advanced technologies to compete in the marketplace. However, the Nigerian insurance sector

is yet to realise this new development and gear up for the transformation that is sweeping the entire global insurance space. Competing on traditional brick-and-mortar insuring still characterizes insurance business in Nigeria hence the sector has remained grossly underdeveloped and underperforming. Presently, insurance companies rely on government accounts and compulsory insurance to survive without much creativity to explore the huge market potential that an estimated population of 206million people offer. The digital age is here and only those companies that key into it will remain in business or stagnate as technology laggards waiting to be swept away by the competition. Due to the poor image of the Nigerian industry arising from the lack of creativity in the sector, most lucrative businesses are lost to more digitally-oriented foreign competitors. Most previous studies on the competitiveness of the Nigerian insurance sector have tended to focus more on factors such as poor capitalisation, absence of skilled manpower, customer apathy among others (Babington-Ahaye, 2014; Ehiorobo, 2020; Eketimenhin, 2011; Oghojafor, Ladipo & Rahim; 2012; Oke, 2012) without addressing the issue of poor adoption and usage of modern technology. This study is therefore, an attempt to fill this gap by appraising how Nigerian insurance companies can benefit from the digital transformation currently going on at the global level and to investigate if the relationship between digital insuring and competitive advantage can be moderated by financial resource capability of insurance firms in Nigeria.

1.2 Objectives of the Study

The main objective of this study is to appraise digitization of insurance value chain on competitive advantage in Nigeria, Specifically, the research will:

i. determine if there is any relationship between digitization of insurance value chain and the quest for competitive advantage by insurance firms in Nigeria; and
ii. examine if the relationship between digitalization of insurance value chain and competitive advantage is moderated by financial resource capability.

1.3 Research Questions

i. What kind of relationship exists between digitalization of insurance value chain and competitive advantage?
ii To what extent can the relationship between digitalization of insurance value chain and competitive advantage be moderated by financial resource capability of a Nigerian insurance firm?

1.4 Research Hypotheses

i. There is no significant relationship existing between digitalization of insurance value chain and the quest for competitive advantage by insurance companies in Nigeria.
ii. The relationship between digitalization of insurance value chain and competitive advantage cannot be moderated by financial resource capability of insurance firms in Nigeria.

2.0 Literature Review

2.1 Theoretical Framework: Resource Dependence Theory (RDT)

The resource dependence theory was popularized by Pfeffer and Salancik in 1978 after the publication of their book "The External Control of Organisations: A Resource Dependence Perspective". The theory presupposes that the resources organizations require to strive in their various industries are in the hands of external actors and these external resources shape the behaviour of the firms. While insurance remains a part of the financial ecosystem, digital technology remains external to the insurance industry. However, current developments in global businesses have been putting pressure on corporate managers to develop their business models around emerging digital technology to survive and remain relevant in an increasingly digitalized world. Such managers must rely on external technology firms to acquire and deploy the kind of technology they require for their own businesses. Consequently, any insurance firm that wants to strive for competitive advantage over rivals must embrace digital transformation that is consonant with developments in the financial ecosystem which includes digital insuring. This assertion becomes more compelling in markets that are increasingly dominated by millennial who are mostly tech-savvy and have no patience with traditional ways of doing business. Based upon this, insurance companies must depend on computer, internet, data and software development companies to acquire and deploy the relevant digital technology that can improve their competitiveness in the insurance industry hence this theory is deemed significant to underpin this study.

2.2 Relevant Digital Technologies for the Insurance Industry

2.2.1 Mobile Phone Technology

A major innovation contributing to the reshaping of the insurance industry is the spread and advances in mobile phone technology. With the development of android and iphones, the penetration of smartphones is expected to reach 75percent in 2021(Swiss-Re, 2020). Apart from its capacity to provide valuable data, smartphones enables insurance companies to reach millions of people that were hitherto, not captured in the insurance net. Mobile phones makes it possible to communicate seamlessly with customers at any time of the day, discussing available products and services while also offering them personalized services for more customer engagements. Mobile phones enable insurers to spot customer trends and evolving needs and act fast to fill those needs. With the frequent interaction with customers, mobile phones make it possible to build better relationships with key customers thereby enhancing customer retention. Increasing contacts through mobile phones is reducing traditional insuring thus, bringing down personnel and other related costs.

2.2.2 Artificial Intelligence (AI)

Artificial intelligence can be described as a process whereby human intelligence is replaced with computer programmes and robots that perform tasks that are similar to human beings (Shabbir, 2015). Artificial intelligence has the ability to sense, learn, reason, plan, solve problems, and make predictions, and decisions faster than humans can. AI is gaining more popularity today in the insurance industry due to its ability to recognize images, identify spoken words and also capable of utilizing unstructured and unlabelled data (Swiss-Re, 2016). With global shift towards the adoption of AI in virtually every industry, the insurance sector has been lagging behind others especially in developing countries like Nigeria. Scor (2018) sees the use of AI as the technology to re-shape the insurance sector in the near future due to its numerous

benefits especially, as it can be applied to every aspect of the insurance value chain. Deloitte (2017) notes that the adoption of artificial intelligence, the mastery and demystification is the only sure way to success in the insurance industry of the future.

2.2.3 Internet of Things (IoTs)

Internet of Things is facilitating the availability of new data sources and more reliable data for better risk analysis, risk modelling, and risk pricing for underwriting policies. The IoT is a network of devices that collect, monitor and share data through the internet. These interconnected devices can be in the form of sensors in smart homes, wearables for monitoring health conditions, automobiles, kitchen appliances, home security systems, energy, and transportation infrastructure.

2.2.4 Big Data

Data technology is transforming the very nature of risk by facilitating new ways to create, capture, and analyse risks which are vital for insurance underwriting. The International Data Corporation says data technology is frog-leaping twofold every two years (Swiss-Re, 2016). In today's digital world, there are countless number of seamless, real time methods by which customer data can be obtained to help in more efficient risk analysis for underwriting decisions. Online, real time data about health issues of a client can be obtained through biometric wearables, cars and driving habits can be obtained from telematics while smart homes are equipped with sensors that make risk assessment easier and faster.

2.2.5 Telematics

Telematics are devices that can transmit individual risk profiles of clients for more efficient risk assessment. Motor vehicle insurance is progressively depending on real time data obtainable from the sensors that are placed on the vehicle to monitor driving habits, environmental conditions and other probable causes of road accidents. Telematics help in mitigating moral hazards, improves policyholders' personal discipline on the road while driving (Klapkiv & Klapkiv, 2018). Telematics, although still evolving, has the potential for revolutionary growth as it can blend insurance, digital technology and transportation (Ostagar, 2018).

2.2.6 Blockchain

Blockchain is a form of distributed consensus system that uses cryptography for enabling transactions that can be instantly validated and securely maintained through computational power and network users thereby eliminating the need for a trusted central authority. Blockchain was first used in Bitcoin which is a digital currency that is capable of replacing the current coin and paper money. Blockchain is found useful in the insurance industry in areas of asset verification and title insurance as an asset's entire history can easily be obtained through the technology thus making it easy for risk classification and premium estimation. Blockchain technology can help insurers to detect fraud, eliminate errors and negligence by providing a decentralized digital repository for independent verification (Swiss-Re, 2020).

2.2.7 Drones Technology

Another evolving technology in digital insuring is the use of drones. Drones are small unmanned aerial vehicles that allow easy access to remote and dangerous terrains after man-made or natural disasters occur to facilitate underwriting and claims management. The technology collects aerial data, and assess loss through advanced imagery analytics. This facilitates risk analysis and claims payments determination.

2.3 Digitization of Insurance Value Chain

Digitization and internalization of business have become a compelling necessity for achieving competitive dominance in every industry in today's global economy. The insurance industry value chain also lends itself to these ubiquitous technologies hence every node in the value chain can be improved with relevant digital application. The value chain elements of interest in this study are those proposed by PwC (2003) which include product development, sales and distribution, new business underwriting, claims management, payment systems, and customer care. Product development is a major area where technological progress has brought about innovations in the insurance industry. For example, on-demand insurance, Peer-to-Peer (P2P), Business-to-Business (B2B) solutions are being developed through smart contracts. For sales and distribution of insurance products, artificial intelligence provides numerous modes of interfacing with customers as well as benefits accruing to both company and customer. For instance, chatbots can be deployed for customer service and this technology operates 24/7 offering standard solutions to customer requests and challenges online and real time. AI technologies help salespeople in customer mapping, workload balancing/leads allocation for effective market segmentation, computerized demand analysis, generation of new product ideas, development of customer profiles, effective target marketing and automated recommendation of products to customers (Genuit, 2018). Claims management is being mitigated by deploying drones technology for aerial analytics of difficult terrains, wearables are providing online, real time information about health insurance policyholders while smart homes are equipped with sensors that provide valuable data about fire, burglary and other hazards for analysis and decision making for claims payment. Payment systems are automated and has, perhaps, gained more from the new digital technology as online transactions have virtually taken over the traditional cash-based transactions for premium and claims payments in insurance business (Deloitte, 2017; Klapkiv & Klapkiv, 2018; Ostagar, 2018). Mobile phone technology has made it easy to reach customers at any time of the day and enhances easier communication for better customer relationship management (Ehiorobo, 2013).

For appropriate risk pricing and underwriting, digitization of the insurance value chain has become more compelling due to information asymmetries in insurance business. The business model developed by the insurer can only become successful if the quality of information regarding the risk profiles of clients can be obtained for appropriate pricing (Atlasmag, 2021). While it is very easy to automate certain risks and determine their costs, for example, motor vehicle insurance, other risks, such as health insurance may not lend themselves to such easy assessment and the company may have to rely on the opinion of third party expertise to resolve information asymmetry. However, with new technologies like internet of things (IoTs) and Big Data, the capacity to collect, analyse and interpret such data has become much easier (Scor, 2018).

2.4 Moderating Role of Financial Resource Capability

Financial resource capability lies at the heart of ecosystems that seek competitive advantage in every market economy. Enz (2008) argues that companies which are financially strong and stable are capable of responding swiftly and authoritatively to new business opportunities, withstand threats from the external environment and gain competitive advantage. The acquisition of digital technology or the more ambitious acquisition of Insuretech start-ups require a strong financial capability to achieve. Thus, the importance of financial resources as a major source of gaining competitive superiority among rivals cannot be overemphasized. With improved digitalization and internalization of the insurance industry value chain, financial resource capability will alter the competitive equation of the firms operating in the entire industry. However, the Nigerian insurance sector cannot be classified among financially strong firms in the global cycle. This is perhaps, due to their low levels of capitalization which is currently estimated at Three Hundred Billion Naira (N300 Billion) equivalent to $800 million (Czartorisky, 2019). The poor financial resource capability of the Nigerian insurance industry has denied it access to most of the lucrative businesses in oil and gas, aviation and marine insurance which are often ceded to European and American insurers (Agboola, 2019). Financial resources can moderate the relationship between technology and competitive advantage in the insurance industry in the following ways: firstly, the through the proactiveness of first-movers, through the innovativeness of the digitally conscious firms and the finally, through the risk-taking appetite of the entrepreneurial firms.

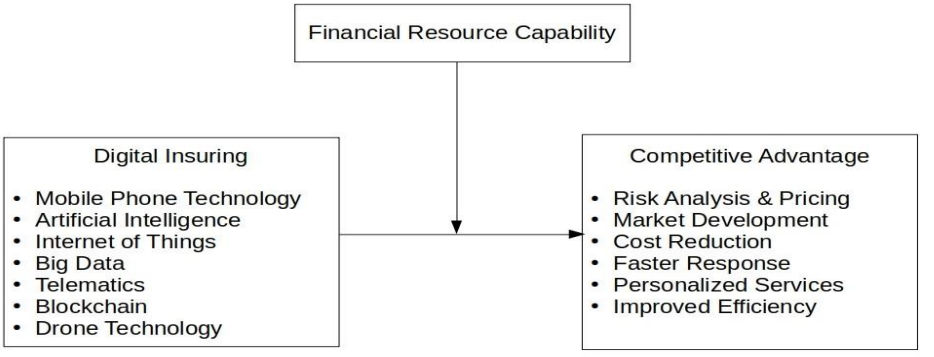
2.5 Competitive Advantage

Every organization strives to gain competitive advantage over rivals in the marketplace. Rumelt (2003) describes competitive advantage as whatever causes revenue increases over expenses while Kay (1993) sees competitive advantage as a firm's distinctive capabilities resulting from behaviours that competing organizations do not possess. Firms strive for competitive dominance in their chosen markets by striving to offer better value to their customers than their competitors. Value creation is at the heart of competitive advantage as firms that can offer greater value to their customers at a cost lower than it took to create that value will surely possess competitive advantage (Tanwar, 2013). It is noteworthy that competitive advantage can only be meaningful if a firm can sustain it for a fairly long period of time. Therefore, a firm that wants to remain in business for a long period of time must strive for sustainable competitive advantage. Sustainability arises when a firm can continually create value that is beneficial to customers which competitors cannot imitate or substitute easily (Hakkak & Ghodsi, 2015). Barney (1991) however, believes that for a firm to create sustainable competitive advantage, it must possess resources that are rare, valuable, non-substitutable and difficult to imitate. Peteraf (1993) opines that four factors are basic necessities to achieve sustainable competitive advantage and they include: homogeneity of resource within the industry, ex-post limits, imperfect mobility of resource and restriction to competitors. To achieve sustainable competitive dominance in the insurance industry, firms should strive to acquire relevant digital technology among other resources, that can guaranty better risk appraisal and analysis for underwriting decision, cost reduction, faster claims investigation and payment decisions, better response to customer needs and higher customer engagements, personalized services and overall improved efficiency.

2.6 Conceptual Model

The conceptual model for this study depicts competitive advantage as the dependent variable and digital insuring as the predictor variable, while financial resource capability is used as a moderating variable.

Figure 1: Conceptual Model



Source: *Author (2023)*

2.4 Empirical Review

Ehiorobo (2020) appraised the impact of technology on the sale and distribution of insurance products in Nigeria and the moderating role of artificial intelligence. The study employed a survey design with 235 questionnaires administered to 17 large insurance firms in Nigeria. Andy Hayes Process v3.3 macro for regression analysis was used to determine the moderation effect. Findings from the research reveal that information technology impacts strongly on the sale and distribution of insurance products in Nigeria. However, the relationship between technology and the sale and distribution is not moderated by artificial intelligence in the Nigerian insurance industry.

Eling and Leymann (2018) investigated the effect of digitization transformation on insurance using Porter's value chain and Beliner's insurable criteria. The study made use of the dataset of 84 articles and industry studies. Findings from the research unveiled four major challenges currently facing the insurance industry and they include: enhancing customer experience, business process re-engineering, developing new and innovative products and competition from outside the industry. Conclusion from the research include the need for the insurance industry to gear up for new and improved information on information asymmetry and risk pooling, implications of disruptive technologies on loss frequency and severity, and increasing dependencies on the interconnectedness of systems.

Scor (2018) examined the impact of artificial intelligence on the re-(insurance) sector. The study gave an insight into how AI technologies will shape the future of the insurance industry. The papers examined the application of AI in the different value chain elements of the insurance industry. Conclusion drawn from the studies indicate that the insurance sector which is currently lagging behind in the adoption and usage of AI will have no choice than to join the bandwagon as the technology will shape the future of the entire industry and those firms that want to remain competitive must adopt the AI technologies.

Klapkiv and Klapkiv (2018) studied technology innovations in the insurance industry. The authors postulated that insurance companies' growth of dependence on innovations in other industries requires strategic re-focusing. The research made use of SWOT analysis to determine the strengths and weaknesses of insurance companies in technological innovations and their application of innovative tools such as software, analytics, sensors and algorithms in the industry value chain. Conclusion from the study is that insurance companies should increase their dependence on innovations from other industries to improve their competitiveness.

Ostagar (2018) investigated the impact of technology and innovation on the insurance sector. The author opined that technological inventions affect both underwriting decisions and business processes. The author further aver that such ubiquitous technological tools like mobile phones, internet, GPS systems, and other technological devices are playing a significant role in market research, market penetration, business promotion and market development. Conclusion drawn from the study is that technology has come to stay as the main resource for survival in the insurance industry and companies should endeavour to invest more in acquiring and deploying digital technology in their operations to ensure survival and competitiveness in the insurance industry.

Talesh (2017) conducted a study on data breach, privacy and cyber insurance detailing how insurance companies act as compliance managers for corporations. The article focused on enterprise capabilities adopting the Resource-Based View (RBV). The author opined that data theft and cyber risks constitute a major threat to the survival of the insurance industry as companies were not prepared to deal with such threats. Conclusion from the research reveal that insurance companies, aside their risk pooling and risk transfer functions, act as compliance managers for firms facing cyber security threats.

Deloitte (2017) conducted a study on the business value of artificial intelligence in the insurance industry. The authors provided both financial estimates of current usage of AI and projection for future implementation of the technology in the global insurance industry. The research was a collection of findings from the Deloitte's research and provided a comprehensive description of benefits and likely challenges of the adoption of AI in the insurance industry. Conclusions drawn from the studies reveal that AI is the recipe for success in the insurance industry and industry players should gear up for its adoption.

Hakkak and Ghodsi (2015) examined how to construct a sustainable competitive advantage model using the balanced score card. The paper used the balanced the BSC approach to measure the performance of corporations in their quest to gain competitive advantage. The research is a quantitative design and a 5 point Likert scale questionnaire was administered to 120 employees of the Social Security department of North Khorasan Province of Iran. Structural Equation Modelling (SEM) was applied for data analysis. The main finding from the research is that the execution of the balanced score card by organisations can result in achieving appreciable competitive advantage.

Dirisu, Iyiola, and Ibidunni (2013) investigated product differentiation as an avenue for achieving considerable competitive advantage using Unilever Nig Plc as a case study. The researchers postulated that while numerous methods of differentiating brands exist, marketers should strive to identify significant product-driven differentiators in their quest to gain competitive advantage. The study which adopted

the survey design, administered 323 questionnaire to respondents which included customers and users of Unilever products in Ota, Ogun State, Nigeria. Regression analysis was used for data. Findings from the research revealed that a significant positive relationship exists between differentiation strategy and organisational performance.

3.0. Methods

3.1 Research Design

The research adopts a descriptive survey design based on the positivist philosophy and an ontological orientation of objectivism in line with all quantitative studies. The choice of a quantitative design is due to the fact that data relating to this study are empirically testable for proof and verification.

3.2 Sources of Data, Sample Obtained and Data Collection Technique

The data used for this study was obtained from 20 insurance firms sampled from the 56 registered underwriting firms in Nigeria using the stratified sampling technique to obtain samples that included 6 life insurance companies, 10 non-life insurance firms and 4 composite insurance companies. A questionnaire divided into three parts with items to measure level of financial capability makes up the first section. The second part consists of items measuring knowledge, adoption and usage of various forms of digital technology while the third part consists of items measuring competitive advantage. A total of 280 questionnaires were administered to the senior staff of these companies out of which 250 were returned and found usable.

3.3 Description of Variables

The variables of interest in this study are one dependent (competitive advantage) and one independent variable (digital technology) while financial resource capability served as a moderating variable.

3.4 Data Analysis Technique

Data for this study was analysed using the Andrew Hayes Process Approach v3.3 for measuring interactions between variables in regression. This method utilizes the grand mean centring which transforms a variable into deviations on a fixed point. It is often very important to centre variables when trying to establish interactions between two or more predictor variables as it makes the *BS* for lower-order effects quite easy to interpret. Thus, when the Andrew Hayes Process tool is applied, centring is automatically effected with SPSS (Statistical Package for the Social Sciences). Consequently, it is easy to establish the effect of the predictor at the mean value of the sample and the average effect of the independent variable across the range of scores for the other predictor.

3.5 Model Specification

The regression model for the interaction effect between the independent variable (digital technology) and the moderator (financial resource capability) is given thus:

$Yi = (b_0 + b_1A_i + b_2B_i + b_3AB_i) + e_i$……..(1)

ie. Competitive Advantage = $(b_0 + b_1IT + b_2AI_i + b_3\ Interaction_i) + e_i$……..(2)

where b_0 = intercept, b_1 = represents the relationship between competitive advantage and digital technology when financial resource capability is zero. And b_2 represents the relationship between competitive advantage and financial resource capability when digital technology is zero; b_3 is simply the interaction between the two predictor variables while e_i is error term.

4.0 Data Analysis, Findings and Discussion

4.1 Analysis, Results and Findings

The model summary in Table1 shows that R =0.256 which indicates a positively strong and statistically significant relationship between digital insuring and financial resource capability. R^2 which is the measure of the variability in the dependent variable explained by the predictors is about .065 and all significant at .01.

```
Model Summary
 R          R-sq         MSE         F           df1         df2
p

.2560       .0655     17.4416      3.4118      3.0000
146.0000         .0192
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Source: *Authors (2023)*

Table 2 shows the regression analysis for the independent variable (Digital Insuring) and the moderator (Financial Resource Capability). From the analysis, it can be deduced that *b* = -.3135; 95% CI [-.07620-.1350]; t = 14.9733, P = .1693 which is an indication that the relationship between digital insuring and competitive advantage in the Nigerian insurance industry is poor and not significantly moderated by financial resource capability. Also, that 0 lies between the lower and upper limits of the confidence intervals equally shows non-significance of the interaction between digital technology and financial resource capability.

```
Model
             coeff      se          t         p         LLCI      ULCI
constant    5.2274    .3491    14.9733    .0000     4.5374    5.9174
Digitech    .7690     .3097     2.4831    .0142      .1569    1.3810
Finance     .2508     .3838      .6535    .5145     -.5077    1.0094
Int_1      -.3135     .2269    -1.3813    .1693     -.7620     .1350
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Source: *Authors (2023)*

Table 3, which further shows the R^2 Change, indicates the additional variation in the dependent variable as a result of incorporating the moderator variable which is .01 and non-significant (p = .17).

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Test(s) of highest order unconditional interaction(s):
       R2-chng         F         df1         df2          p
X*W      .0122     1.9080     1.0000     146.0000     .1693
----------
    Focal predict: Digitech (X)
          Mod var: Finance  (W)
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Source: *Authors (2023)*

Table 4: Linear Model of Predictors of Competitive Advantage

	b	**SE B**	***t***	***p***
Constant	5.22	0.35	14.97	p < .001
	(4.53, 5.92)			
Digitech (centred)	0.77	0.31	2.48	p < .01
	(0.15, 1.38)			
Finance (centred)	0.25	0.38	0.65	p = .51
	(-0.51, 1.01)			
Digitech x Finance	- 0.31	0.23	- 1.38	p = .17
	(-.76, .13)			

Note: R^2 =.06

Source: *Authors (2023)*

Table 4 shows the linear model of the predictors. The summary table indicates that digital technology has positive and statistically significant relationship with

competitive advantage (Digitech, *b* =.77, p < .001) whereas financial resource capability has a positive but non-significant relationship with competitive advantage (*b* =.25, p > .05). However, the interaction effect between financial resource capability and digital technology is negative at *b* = - .31, p =.17 which reveals a non-statistically significant relationship.

4.2 Discussion

Results of the analysis conducted on the data revealed that there exists a strong positive and statistically significant relationship between digital insuring and competitive advantage in the Nigerian insurance industry (*b* = .77; p < =.01). Consequently, Ho1 which states that there is no significant relationship between digitalization of insurance value chain and the quest for competitive advantage in the Nigerian insurance industry is hereby rejected. In addition, Ho2 which states that the relationship between digital insuring and competitive advantage cannot be significantly moderated by financial resource capability (b = -.31; p = .17) is hereby accepted. A further probe into the relationship existing between the variables reveal that the moderation effect between digital insuring and competitive advantage by financial resources is negative (b = -.31; t = - 1.38; p = .17). This is an indication of poor investment in digital technology as there is probably no sufficient funds for the insurance companies in Nigeria to acquire modern technology for their operations. Also looking at the model summary, there exists a positive and statistically positive relationship among the two independent variables and with the dependent variable competitive advantage, at (R = .25; p = .01). However, R2 change which measures the degree of variability in the dependent variable accounted for by the independent variables is .06. This is a clear indication that only 6 percent of the variability in competitive advantage is accounted for by the independent variables. What this simply means is that other factors aside digital technology account for 94 percent of the factors driving competition in the Nigerian insurance industry.

Given this scenario, it can be deduced that the insurance sector in Nigeria is yet to wake up to the universal trend of digitalization of the entire insurance value chain for improved performance and global competitiveness. This assertion is consistent with previous studies such as Babington-Ashaye (2014), Kuye, Adebisi and Ehiorobo (2020). It is also instructive to know that till date, no Nigerian insurance firm has deployed artificial intelligence in any aspect of their value chain (Ehiorobo, 2020; Kuye, et. al., 2020). Investments in other forms of information technology to modernise their operations is still abysmally low hence the sector remains a poor contributor to the nation's GDP.

5.0 Conclusion and Recommendations

This study was undertaken to examine the relationship between digitalization of insurance value chain for competitive advantage in Nigeria and to determine if that relationship is moderated by financial resource capability. 280 questionnaire were distributed among senior staff of twenty leading insurance firms in Nigeria out of which 250 were found usable. Analysis of the data obtained was done using Andy Hayes Process v3.3 for moderation. Findings from the research revealed that although there exists a strong positive and statistically significant relationship between digital insuring and competitive advantage, such a relationship is not moderated by financial resource capability thus explaining the very weak financial status of the Nigerian insurance sector. Further evidence from this study reveal that

the level of investment, adoption and deployment of modern technology for conducting insurance business is abysmally poor. With digital transformation sweeping the insurance industry worldwide, the Nigerian insurance cannot afford to remain a laggard if it wants to remain competitive in a successively globalized world of business where technology is eliminating international trade barriers. Incumbent insurance firms that are unwilling or unable to adapt to new technologies or learn from the new digital start-ups and re-think their business models to reflect the digital realities will experience slow growth, declining profits and loss of market share to more innovative and tech-savvy start-ups. Technology laggards would be less efficient at performing such tasks as risk measurement, assessment, analysis and pricing, claims handling, sales and distribution of insurance policies, quick response and quality underwriting decisions as well as meeting customer requirements. It is instructive to note that the asymmetry of information between customers and the insurance companies remains a driving force behind innovation in the industry. Innovation is the solution to the imperfections in the business relationships between insurers and the insured that prevent them from reducing their risks and maximising their productivity. Modern digital technology has come to minimize such information asymmetry as such ubiquitous technologies like artificial intelligence cloud computing, telematics, Big Data, wearables sensors, blockchain, mobile phones, Internet of Things and drones technology that have been successfully tested and used in other fields lend themselves to application in the insurance industry.

Based on the findings of this research, the following recommendations are made:

i. Insurance companies in Nigeria should gear up to embrace modern technology to mitigate the risks of information asymmetry and disruptive technologies associated with the digital revolution across industries
ii. Insurance firms need to invest in building state-of-the-art IT infrastructure that are secure, safe and customer friendly to enhance performance and meet emerging customer needs.
iii. There is also an urgent need for insurance companies in Nigeria to partner or acquire Insuretech companies that can fast track their digitalization process in order to enhance their competitiveness.
iv. There is a need to abandon the brick and mortar insuring that currently characterizes the insurance sector in Nigeria and embrace the digital transformation that can attract mostly the millennial of Generation Y who have no patience with analogue processes.
v. Finally, the insurance industry need to recapitalize or merge in order to strengthen their financial resource capability to be able to acquire relevant technologies to assist in better underwriting decisions and pay claims as they arise.

5.1 Limitations and Suggestion for Further Research

This study is a cross-sectional survey design for which data was obtained from only 20 out of 56 registered underwriting insurance firms in Nigeria. Perhaps, a longitudinal study incorporating more insurance companies outside the ones included in this study may produce a different result.

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