

Technology Diffusion as Therapeutic Prescription for Improved Performance in the Ailing Nigerian Insurance Industry

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Abstract:

Purpose and Originality: The study aims to appraise how technology diffusion can improve the performance of the insurance companies in Nigeria. The originality of the research stems from the inclusion of artificial intelligence as a distinct technology that is relatively unknown in the Nigerian insurance industry.

Method: A cross-sectional survey strategy was adopted, and questionnaires were administered to 235 respondents. Data were analysed using multiple regression analysis. The theoretical underpinning was The Diffusion of Technology Theory.

Results: The two predictor variables (artificial intelligence and other information technology infrastructure) have a positive and significant relationship with improved performance of the insurance industry in Nigeria ($R = .17$; $p < .05$). However, the amount of variation in the dependent variable explained by the two predictor variables ($R^2 = .0028$) was relatively low which is an indication that the insurance industry in Nigeria has not embraced artificial intelligence and even the adoption of other forms of technology is very low.

Society: The impact of this research on the Nigerian society is that if the insurance industry improves its performance, it can render its risk mitigation function better by hedging risks associated with business ventures which can encourage more entrepreneurs to venture into business. With this, more employment will be generated and contribution to GDP and government tax revenues will increase. In addition, a prosperous insurance industry will be able to carry out more functions of corporate social responsibility.

Limitations / further research: This research is not without some limitations and as such, the findings should be interpreted with some caution because the data was obtained at a single point even though common error bias was minimised. We suggest that a longitudinal design or a different method of data analysis might yield a more robust result.

Keywords: diffusion, competition, artificial intelligence, strategy, technology.

1 Introduction

The performance of the Nigerian insurance industry is abysmally poor. The sector lags behind other major sectors of the economy due largely to its inability to key into the digital economy that is capable of improving customer acquisition and retention as well as driving costs downwards. The Nigerian insurance industry contributes less than 0.12% to Nigeria's gross domestic product [GDP], (Daniel, 2014) and has insurance penetration rate of 0.3 % (Statistica, 2016). Nigeria ranks 34th in Africa in terms of insurance penetration coming behind such countries as South Africa with a penetration rate of 16.99 %; Namibia, 6.69 %; Lesotho, 4.76 %; Mauritius, 4.1 %; Zimbabwe, 4.09 % and Kenya, 2.83 % (Statistica, 2016).

Nigeria also ranks low in terms of insurance density (a measure of gross premium written per capital) with \$6.2 compared to South Africa with \$762.5; Kenya, \$40.5; Angola, \$30.5; and Egypt, \$22.8 (Augusto & Co, 2019). The total amount of premium written in Nigeria in 2015 amounted to about \$1420 million consisting of \$974 million for non-life and \$446 million for life insurance compared to South Africa that had \$46 billion in the same year (Soares, 2017). For a country with a population exceeding 200 million (NBS, 2019), Nigeria presents a viable market for insurance business to thrive if only the right strategies are crafted to develop and distribute products that match the lifestyle of the teeming population. The highly uncontested market of microinsurance, which can address the insurance needs of the rural majority and the urban poor has not been developed and hardly available in the Nigerian insurance market.

Due to poor capitalisation and technical deficiencies, most lucrative insurance businesses are ceded to foreign insurers, mostly American and European companies. For instance, Czartoryski (2019) avers that the total insurance industry capitalisation in Nigeria is N300billion (Three hundred billion Naira) which is a paltry \$830 million. This amount of money is hardly adequate to underwrite risks in multi-billion oil and gas businesses hence only 30 % of oil and gas insurance is locally covered by Nigerian insurers thus leading to capital flight (Agboola, 2019). Similarly, the Aviation Refuelling Liability Insurance of II Plc (Former Mobil Nig. Plc) with an insurance value of \$1billion has 10.03 % local cover while 89.97 % of the total sum is insured abroad. The Dangote Oil Refinery, which is near completion stage with an insured value of \$6.8 billion will likely lose 72 % of insurance business to foreign insurers (Agboola, 2019).

The insurance industry in Nigeria, perhaps, has not keyed into the digital world and thus lags behind its peers in some other countries in the adoption of modern technology. For example, artificial intelligence has become the new game-changer in almost every industry globally, including insurance, but this ubiquitous technology is relatively unknown to the insurance industry in Nigeria. In order to become competitive and be globally relevant, business managers are investing vast amounts of money on artificial intelligence as it is capable of doing several things, handles a large amount of data and proffer solutions to business problems faster, more accurately and cheaper than humans can (Deloitte, 2017; Scor, 2018; Shabbir & Anwer, 2015). The business value derivable from information technology that

culminates in gaining competitive advantage is well documented in the literature as no modern organisation can thrive without embracing information technology (Bruque-Camara, Moyano-Fuentes, Hernandez-Ortiz, & Vargas-Sanchez, 2014; Cakmak & Tas, 2012; Obradovic, Ebersold & Obradovic, 2015; Powell & Dent-Micallef, 1997; Singhal, 2014). It is, perhaps, also a well-known reality among insurance practitioners in Nigeria that it has not done much in acquiring and deploying modern information technology in its business operations (Ujunwa & Modebe, 2011).

Aim and Objectives of the Study

The main aim of this research is to appraise technology diffusion as a therapeutic prescription for the ailing Nigerian insurance industry. Specifically, the study will attempt to:

- Examine if artificial intelligence can be used to improve the performance of the Nigerian insurance industry;
- Analyse the extent to which the adoption of other forms of information technology infrastructure can boost insurance industry performance in Nigeria.
- Determine how the combined effect of artificial intelligence and other forms of information technology can improve the performance of insurance companies.

As such, the following research questions were developed:

- To what extent can artificial intelligence enhance the performance of the insurance industry in Nigeria?
- To what extent can the other information technology infrastructure improve the performance of insurance companies in Nigeria?
- Can a combination of artificial intelligence and other information technology infrastructure improve the performance of insurance companies in Nigeria?

with the corresponding null and alternative hypotheses

H₀1: Artificial intelligence will not significantly improve the performance of insurance companies in Nigeria;

H_A1: Artificial intelligence will significantly improve the performance of insurance companies in Nigeria

H₀2: Other forms of information technology infrastructure will not significantly improve the performance of insurance companies in Nigeria.

H_A2: Other forms of information technology will significantly improve the performance of insurance companies in Nigeria.

H₀3: A combination of artificial intelligence and other forms of information technology will not significantly improve the performance of insurance companies.

H_{A3}: A combination of artificial intelligence and other forms of information technology will significantly improve the performance of insurance companies in Nigeria.

2 Theoretical framework

2.1 Theoretical Underpinning: Diffusion of Innovations Theory

Diffusion of innovations theory can be credited to the works of Evereth Rogers in 1962. Rogers postulates that diffusion is how an innovation is passed to, and disseminated among a group of people in a given social system. Rogers (1962) believes that four quintessential elements help in spreading any new idea and these include the strength and relevance of the innovation itself, the channels of communication, time as well as the nature of the social system where the innovation is to take place. The entire process, according to Rogers, depends largely on the quality of human capital asset charged with the responsibility of implementing the innovation.

The diffusion of innovations theory attempts to explain how, why and to what extent a new idea or technology can spread. Rogers further avers that the various categories of adopters are the innovators who embrace any new idea as soon as it is popularised, early adopters who follow next, early majority and lastly, the laggards adopt a wait and see attitude to see and observe the impact of the innovation on others before slowly introducing it evolutionarily. Technological innovation involves information about the idea of new technology and options are weighed before a decision is reached. Consequently, when it is eventually adopted, it helps to minimise doubt and uncertainty. The diffusion of innovations theory is found relevant to this research as the insurance industry in Nigeria is yet to adopt such modern technological innovations as artificial intelligence, machine learning and internet of things (IoT) in their operations.

2.2 Conceptual Review

2.2.1 Technology in as a means of improving organisational performance

Technology can be conceptualised as the application of scientific discoveries in practical ways. The skilful deployment of machines, tools, knowledge, skills, information resources, expertise and equipment perhaps makes the difference between high performing organisations and those waiting on the edge. Singhai (2014) opines that as technological advancement is fuelling the pace of globalisation, increasing rivalry among firms and changing customer requirements are placing more demands on firms to seek ways to create competitive advantage. With businesses now depending increasingly on information technology, firms that want to survive and remain competitive cannot ignore the pivotal role of technology in their daily operations (Cakmak & Tas, 2012). Information technology (IT) has been found to be instrumental in creating distinctive competitive advantage, help a firm in long-term value creation and enhance the relationship between employees and customers (Dehning & Stratopoulos, 2003; Strebinger & Trailmaier, 2006; Tabb, 2006). It has been noted that the

advantages that firms derive from the application of technologies that culminate in productivity improvement is contingent upon how well these technologies are adopted by the entire company (Gagnon & Dragon, 2002). Obradovic, Ebersold and Obradovic (2015) describe technology as one of the major stimulants of global market formation through integration of markets. The researchers also conclude that there is a 'direct proportionality between the extent of technological advancement and the growth of international trade'. For the purpose of this study, the two aspects of technology that will be focused upon are artificial intelligence and information technology.

2.2.2 Artificial Intelligence (AI)

To disambiguate the phrase 'artificial intelligence', it is necessary to break the phrase into its parts of 'artificial' and 'intelligence'. Artificial is something fake, imitated, unreal, unnatural and synthetic (Honby, 2001). Intelligence refers to being able to learn, acquire, reason and apply different knowledge and skills in solving problems (Shabbir, 2015).

Artificial intelligence is simply 'intelligence' exhibited by machines (Scor, 2018). Artificial intelligence (AI) can be viewed as using machines, computer programmes and systems to execute the intellectual and imaginative roles of humans (Shabbir & Anwer, 2015). AI, big data, and internet of things (IoT) are creeping steadily into every facet of human lives as business executives are equally experiencing this transformation.

AI is a ubiquitous tool that can be used for several different things that the human mind can conjure. AI may be divided into two groups of Narrow AI and General AI. The popular AI in use today is the Narrow Artificial Intelligence which can be deployed or programmed to perform specific tasks as required by the programmer. Health (2018) opines that narrow AI can be recognised as it is used in cases like *Siri*, the Apple iPhones' virtual assistant with speech and language recognition capabilities; the vision recognition systems of self-driving cars; in product development and procurement decisions, and customer service delivery systems among several other uses. The general AI is still at its developmental stages and may become fully operational around 2075 (Health, 2018).

2.2.3. Benefits for the Insurance Industry can Derive from Artificial Intelligence

Artificial intelligence has gained popularity in numerous fields of human endeavour, including manufacturing, agriculture, the auto and aviation industries, pharmaceutical, finance and marketing (Scor, 2018). The insurance industry is perhaps, a late adopter of this ubiquitous technology which poses two fundamental challenges: Firstly is the reality of new forms of risks which can now come to the fore as a result of AI which has to be fully assessed, calculated, computed and mitigated against through insuring. The poser here is that when an insurance company insures a self-driving vehicle and it is involved in an accident, who would be answerable? The end-user, the manufacturer, or the developer of the software behind the AI technology? This becomes a difficult question for the insurer to handle. The second challenge is how insurance firms can leverage the potential of AI for insuring against different

types of risks associated with recent technological developments in cyberspace and AI technologies.

In today's global economy, artificial intelligence, big data, data science and internet of things (IoT) are becoming part of every aspect of human existence, and corporate leaders are equally experiencing this transformation (Dickson, 2020). In most developed economies of the world, insurance executives are redirecting their investments on acquisition and deployment of artificial intelligence and related technologies to assist agents, brokers and the workers to improve end-user experience with personalised services, prompt claims settlement and individual risk-based underwriting processes (Accenture, 2017). AI algorithm has contributed immensely to cost savings, increased efficiency, and it is revolutionising customer experience. Dickson (2020) opines that improvements in edge hardware, cloud computing and internet of things (IoT) have made information about objects, people and business enterprises a lot easier to obtain in the digital world and data processing is readily and easily achieved by machine learning algorithm.

Lloyds (2018) observes that internet of things (IoT) is capable of transforming the entire society and that worldwide connectivity will attain 25 billion devices to the web by 2020 and this could more than quadruple to 125 billion by 2030. The report further notes that internet of things can assist insurance companies to appreciate and obtain a clear understanding of their risk exposures especially in marine, digital homes, water, and agricultural sectors with implications for new product development and better risk pricing capabilities. On a similar note, Dickson (2020) opines that the motor vehicle insurance will benefit from the use of sensors such as 'telematics' to collect real-time data from motor vehicles and their drivers unlike what previously obtains by relying on historical data to develop motor vehicle insurance policies. The machine learning algorithm can be applied to analyse telematics data to obtain driving habits and other useful information. The same data can assist analysts to reconstruct accident scenes which will provide useful information for claims processing and eventual settlement.

Health insurance can equally benefit from AI models as they can easily be applied to collate claims data, prior authorisation, determination of eligibility for cover, policy information or engagement data and healthcare utilisation data in order to create a complete profile of all the candidates applying for cover. Fraud prevention and control is another remarkable benefit that can be derived from AI through its machine learning algorithm as it can easily and readily glean existing patterns from separating legitimate claims from fraudulent ones. Advances in Natural Language Processing (NLP) has also helped in ushering in an array of chatbots that enhance customer experience and has also led to reduced time for claims processing. More recently, improvements in Convolutional Neural Networks (CNN) have made significant progress in image recognition and classification of data with unprecedented accuracy. Insurance companies are now capable of using an image recognition algorithm to automate former manual processes in accident case processing and can obtain results within a few seconds (Dickson, 2020).

There have always been two parties to every insurance contract, which are the insurer and the insured. Both parties have always had asymmetrical information which is quite significant to understanding insurance economics. For the insurer, the company attempts to gather information by using questionnaires, observation and other statistical methods to predict the behaviour of the insured. On the other hand, the insured person would like to underplay the risk, take advantage of the value of the claim and influence the price for his/her benefit. Kessler (2018) observes that this information asymmetry could lead to adverse selection and moral hazard. However, recent developments in AI technology and big data collection will eradicate this information irregularity and bring comprehensive and observable transparency into the insurance transaction. Kessler (2018) further notes that AI and big data are capable of imparting the way insurance business is conducted globally on both the demand and supply sides.

Deloitte (2017) observes that artificial intelligence is capable of transforming the entire insurance industry in such a way that all parties in the insurance ecosystem including brokers, underwriters, reinsurance companies, and even customers will adopt AI tools and methodologies. This will involve improved efficiencies in customer experiences, risk analysis, underwriting, claims management, and new product development. Shabbir and Anwer (2015) opine that artificial intelligence will definitely transform how companies compete around the entire globe and will ultimately culminate in driving corporate performance and profitability.

2.2.4 Other Forms of Information Technology (IT)

The business value of information technology (IT) is, perhaps, clearly appreciated in virtually every business operation and has consequently become a major differentiating factor for firms jockeying for market share and competitive advantage. O'Brien (2003) posits that information technology is a system that makes use of computer hardware, software, and communication networks to retrieve and process data in order to produce information for individuals and businesses. Obradovic et al. (2015) argue that much of the increase in global productivity in the last decade can be attributed to improvements in information and communications technology. Several studies have been carried out to establish the strategic advantages of information technology usage in business firms. For example, Cakmak and Tas (2012) believe that information technology can help an organisation to decrease costs and increase revenues and therefore, a veritable avenue of attaining the desired level of competitive advantage. It significantly improves operational efficiency and transforms the strategy a business may adopt to compete (McFarlan, 1984); information technology can also be incorporated into the major activities of a company's value chain to create or improve sustainable competitive advantage (Porter & Millar, 1985; Singhal, 2014).

O'Brien (2003) posits that information technology is capable of altering the strategies companies may adopt to compete by deploying information technology strategically as a vehicle of organisational renewal, and an investment that galvanises an organisation to

formulate strategies and business processes that will enable it to reengineer or reinvent itself to compete favourably in the marketplace. On the strength of this, information technology can be applied to achieve considerable cost leadership, differentiation, sustainable growth, innovation and strategic alliance.

2.2.5 Organisational Performance

Every organisation is expected to meet some performance expectations of the stakeholders. The organisations that score high in meeting these performance expectations are regarded as high performers while those that score low on the scorecard are regarded as low performers (Antony & Bhattacharyya, 2010). Peterson, Gijsbers, and Wilks (2003) define organisational performance as a firm's capability to utilise its scarce resources in an efficient manner in producing end-user requirements in line with corporate mission and objectives. Slater and Narver (1994) see organisational performance as a firm's market and financial performance that are closely related to the firm's economic value. Langerak, Hultink, and Robben (2004) posit that the market performance perspective is viewed in competitive terms and this may relate to the firm's market share, creating customer value, product performance, new product development and product innovation capabilities. Kaplan and Norton (1992) argue that firms have paid too much attention to financial measures of performance, which they say, are inherently backwards-looking.

2.3 Conceptual Model

The model depicts the individual and combined relationship between the independent variables which are artificial intelligence and other information technology resources which can be deployed by a firm for improved performance (dependent variable) as well as the components of both the dependent and the independent variables.

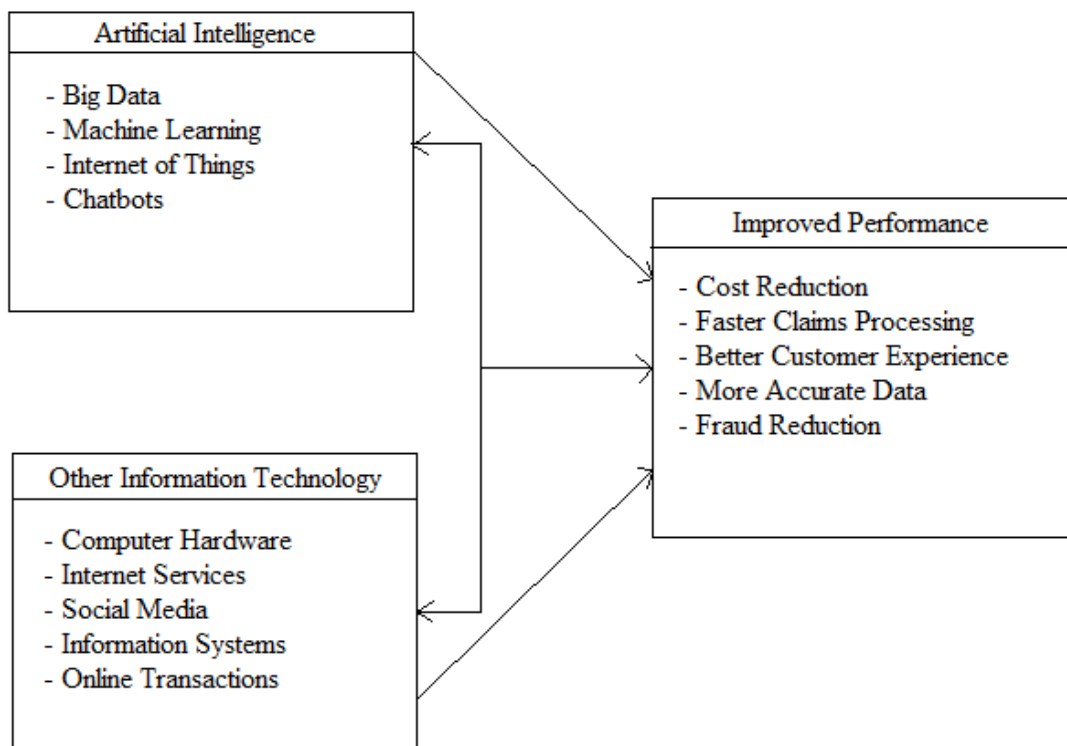


Figure 1. Conceptual Model

3 Method

The study utilises a quantitative research design based on a cross-sectional survey strategy and rooted in the positivist research philosophy and an ontological orientation of objectivism.

Fifteen insurance companies from the 56 registered underwriting firms in Nigeria were included in the study using the stratified sampling technique to obtain samples that included four life insurance companies, eight non-life insurance firms and three composite insurance companies. A questionnaire divided into three parts with items to measure knowledge, adoption and investment in artificial intelligence makes up the first section. The second part consists of items measuring knowledge, adoption and usage of other forms of information technology while the third part consists of items measuring organisational performance. A total of 300 questionnaires were administered to senior staff of these companies out of which 235 were returned and found usable. Reliability of the instrument was tested using Cronbach Alpha with the three major sections of the questionnaire having 0.9, 0.7 and 0.8, respectively. Validity was obtained through the test re-test method and the opinion and suggestions by experts on the content of the instrument.

The variables of interest in this study are one dependent (Organizational Performance) and two independent variables consisting of artificial intelligence and other forms of information technology.

The analysis that was found useful for this study is the ordinary least squares (OLS) method of multiple regression. Data obtained from the research instrument was subjected to statistical analysis using the Statistical Package for the Social Sciences (SPSS V. 22).

The multiple regression applied in this research assumes the form of a linear combination of variables as expressed in the regression model.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e \dots \dots \dots (1)$$

α = intercept which predicts the value of Y if X=0;

β_1 and β_2 represent the regression coefficients of the relative weights of the predictors;

X_1 = Artificial Intelligence;

X_2 = Other forms of Information Technology

e = is the error term or the part of Y not explained by X.

4 Results

This section deals with the analysis and findings based on the output of SPSS that is applied for data analysis.

Table 1 shows the mean and standard deviations of organisational performance, artificial intelligence, and other information technology infrastructure.

Table 1. Descriptive Statistics and Correlations for Study Variables

Variable	n	M	SD	1	2	3	4	5
Org Perf	235	5.172	4.34	-				
AI	235	4.83	1.07	.122**	-			
Infotech	235	5.26	1.07	.163*	.565*	-		

$p \leq .05^{**}$ $p \leq .01^*$

Org Perf = Organisational performance; AI = Artificial intelligence; Infotech = Information technology

Table 1 also depicts the correlation coefficients of the independent variables and their degrees of significance. Thus, artificial intelligence has a positive and significant relationship with organisational performance $r = .12$, $p < .05$; while other forms of information equally have a positive and significant relationship with organisational performance $r = .16$, $p = .00$.

Table 2. Model Summary for the Regression Analysis

Model	R	R Square	Adjusted R	Standard Error	Durbin-Watson Square of the Estimate
1	.167	.028	.020	4.3016	2.014

a. Predictors: (Constant), Other Information Technology, Artificial intelligence

b. Dependent Variable: Organisational performance

Table 2 depicts the regression analysis of the study. It shows that the two predictor variables have a positive effect on the performance of insurance firms in Nigeria at $R = .17$. However, a low R^2 of .028 indicates that less than 3 % of the variability in the dependent variable is explained by artificial intelligence and other information technology infrastructure. The model shows a very good fit with Durbin Watson at 2.0, indicating the complete absence of independent errors.

Table 3. ANOVA of the Variables

Model 1	Sum of Squares	DF	Mean Square	F	Sig
Regression	123.391	2	61.695	3.334	.034
Residual	4292.938	232	18.504		
Total	4416.329	234			

a. Dependent Variable: Organisational performance

b. Predictors: (Constant), Other Information Technology, Artificial intelligence

Table 3 shows the ANOVA of the variables, which confirms the model fit with an F-ratio of 3.3 and an overall significance level of $p < .05$ thus making the study variables highly significant.

Table 4. Showing the Unstandardized Coefficients of the Study Variables

Effect	Estimate	SE	95% CI		P
			LL	UL	
Fixed Effects					
Intercept	1,297	1.556	-1.791	4.385	.409
AI	.188	.336	-4.474	.849	.577
Infotech	.564	.320	-.066	1.194	.079

Note: CI = Confidence Interval; LL = Lower Limit; UL = Upper Limit

Table 4 shows the coefficients of the study variables using the unstandardised coefficients because the constant (beta zero) is included. These b-values indicate whether a relationship exists between the predictors and the dependent variables. A positive b-values shows that a relationship exists whereas a negative b-value indicates an absence of a relationship. Artificial intelligence has $\beta = .19$, $p > .05$ which invalidates H_{01} (Null hypothesis), and therefore, H_{01} is accepted. Other forms of information technology has $\beta = .56$, $p > .05$, which also invalidates H_{02} , and therefore, H_{02} or the null hypothesis is accepted. However, a combined regression coefficient of .17, and $p < .05$ shows that when artificial intelligence is combined with other forms of information technology, organisational performance can improve; therefore, H_{03} , or the null hypothesis is rejected while the alternative hypothesis is accepted.

5 Discussion

Findings from this study reveal that the Nigerian insurance industry is yet to appreciate that artificial intelligence has become the new game-changer in every business, including insurance. There appears to be very shallow knowledge of what the AI technology is all about and how it can improve the fortunes of the industry. Deloitte (2017) provides financial estimates of global insurance industry investment in artificial intelligence but Nigeria was not in the list of countries that are doing so. The researchers observe that AI holds the future for the insurance industry and the earlier companies key into it, the better. From the data collected and analysed for this study, it is abundantly clear that even basic information technology infrastructure is lacking in many Nigerian insurance companies as top management only pays lip service to investment in information technology. With a paltry 0.028 or 2.8 % of the performance of the insurance industry accounted for by artificial intelligence and information technology, it can be reasonably deduced that the sector has not received much attention from the management of these companies. Furthermore, the remaining 97.2 % of industry performance that is unaccounted for by this study comes mostly from other areas not included in this research. Artificial intelligence has a $\beta = .19$, $p > .05$ which indicates its non-significance in the performance of insurance industry in Nigeria. However, other forms of information technology with $\beta = .56$, $p = .07$ shows a better

contribution to performance though significance level slightly exceeds the threshold of $p \leq .05$. Therefore, it is not surprising that Nigerian insurers cannot compete on the global arena as they are bedevilled with a myriad of problems that have curtailed their access to most lucrative sectors of insuring (e.g., oil and gas, aviation, and nuclear liability insurance), as well, as the vast market potential of a large population, that is waiting to be exploited in the country.

6 Conclusion

The study was conducted to ascertain how technology diffusion can be used as therapeutic prescription for the ailing insurance industry in Nigeria. That the insurance sector in the country is performing poorly can, perhaps, be deduced from its low contribution to GDP (0.12 %) or insurance penetration rate of 0.3 %. A total number of 15 insurance companies comprising of 4 life, 8 non-life and 3 composite companies were sampled for the study. A total of 235 questionnaires were retrieved and analysed, and findings from the study revealed that artificial intelligence and other forms of information technology are poorly deployed in the Nigerian insurance industry. While artificial intelligence has a weak and insignificant relationship with organisational performance, the other information technology infrastructure has a stronger relationship with performance though above acceptable threshold in p -value. In conclusion, this study shows that the two predictor variables, namely: artificial intelligence and other forms of information technology, have not contributed significantly to the performance of the Nigerian insurance industry.

It is recommended that operators of the insurance industry in Nigeria should brace up to embrace artificial intelligence as it is the new game-changer in the insurance industry worldwide. They should try and train their staff on AI and IT generally and also improve on their current level of budgetary commitment to information technology to remain relevant and become competitive in an increasingly globalised world.

This research is not without limitations and the findings should be interpreted with some caution. The data were obtained at a single point even though common error bias was minimised. It is suggested that a longitudinal design or a different method of data analysis might yield a more robust result. Also, the insurance companies that were not captured in the sample could also be used for future research to validate or repudiate the findings of this study.

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Povzetek:

Tehnološka difuzija kot terapevtski recept za izboljšanje uspešnosti v bolniški nigerijski zavarovalniški industriji

Namen in izvirnost: Cilj študije je oceniti, kako lahko difuzija tehnologije izboljša uspešnost zavarovalnic v Nigeriji. Izvirnost raziskave izhaja iz vključitve umetne inteligence kot posebne tehnologije, ki je v nigerijski zavarovalniški industriji razmeroma neznana.

Metoda: Sprejeta je bila strategija presečne raziskave, vprašalniki pa so bili izpolnjeni za 235 anketirancev. Podatki so bili analizirani z večkratno regresijsko analizo. Teoretična podlaga je bila teorija difuzije tehnologije.

Rezultati: Dve spremenljivki (umetna inteligenca in druga infrastruktura informacijske tehnologije) imata pozitiven in pomemben odnos do izboljšane uspešnosti zavarovalniške industrije v Nigeriji ($R = .17$; $p < .05$). Vendar je bila količina sprememb odvisne spremenljivke, ki sta jo pojasnili spremenljivki ($R^2 = .0028$), razmeroma nizka, kar kaže na to, da zavarovalniška industrija v Nigeriji ni sprejela umetne inteligence in je sprejemanje drugih oblik tehnologije ocenila celo kot zelo nizko.

Družba: Vpliv te raziskave na nigerijsko družbo je, da lahko zavarovalnica, če izboljša svojo uspešnost, izboljša svojo funkcijo zmanjševanja tveganj z varovanjem tveganj, povezanih s poslovnimi podvigi, kar lahko spodbudi več podjetnikov, da se podajo v posel. S tem se bo ustvarilo več delovnih mest in povečal prispevek k BDP ter prihodki od državnih davkov. Poleg tega bo uspešna zavarovalnica lahko opravljala več funkcij družbene odgovornosti podjetij.

Omejitve / nadaljnje raziskave: Ta raziskava ni brez nekaterih omejitev, zato je treba ugotovitve razlagati previdno, ker so bili podatki pridobljeni na eni točki, čeprav je bila pristranskost pogostih napak čim manjša. Predvidevamo, da bi dolgoročna zasnova ali drugačna metoda analize podatkov lahko dala močnejši rezultat.

Ključne besede: difuzija, konkurenca, umetna inteligenca, strategija, tehnologija.

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