HUMAN CAPITAL DEVELOPMENT, AUDIT PRACTICE AND COVID 19 CHALLENGES

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Abstract

The world has witnessed massive disruptions to the traditional methods of achieving objectives. Organisations and individuals across all profession have battled with two options- embrace the new normal or be left out. Despite all these, users of financial information including investors have continued to look up to auditors on the credibility of financial information through their audit opinion. This study examined Human Capital Development, Audit Practice and Covid 19 Challenges using Human Capital Theory and Stewardship Theory to evaluate how auditors have maintained audit quality amidst covid-19 challenges through reliance on technology and human capital. In carrying out this examination, exploratory research approach was employed. Previous literature, journals and materials related to the study area were reviewed. The study established that while audit profession especially the Big Four has embraced modern technology with massive investment in human capital to minimise the impact of Covid-19 disruptions, there are still vast technology innovations such as cognitive technologies, predictive analytics, deep learning, and quantum computing that are yet to be fully explored. This study noted that the adoption of modern technology driven audit tools when combined with auditors' competence and professional scepticism will continue to enhance clients' satisfaction regarding the credibility of financial statements through the audit opinions. The study recommended Auditors' continuous reliance on technology and the activation of modern audit tools while being mindful of hidden and complex technology risks by heightening and maintaining professional scepticism with more investment in human capital development.

Keywords: Covid-19 Challenges, Audit Services, Technology, Audit Credibility

Introduction

The early methodologies in audit practice have continued to witness modifications as innovations in technology become very prominent in virtually all aspects of auditing. The advent of Covid-19 and the accompanying safety protocols further exacerbated a complete and swift global paradigm shift in the profession. The pandemic came as a shock to humanity as no one was prepared for it including the developed countries. It thrown world leaders off balance, impacted economies and like a wildfire, swept off lives with so much irreparable losses to nations and families. Knowledge was humbled; the wide gaps between the rich and the poor suddenly shrunk leaving a long period of trial and error. On January 30, 2020, the World Health

Organisation (WHO) declared Covid-19, which started in Wuhan Chania, a matter of Public Health Emergency with International Concern, and a subsequent declaration of global pandemic on the 11th of March 2020.

The situation was not different in Nigeria as the pandemic emerged with the usual challenges that also drastically affected economic activities in Nigeria. According to the Nigeria Centre for Disease Control (NCDC), Nigeria witnessed its first case of Covid-19 in Lagos State on the 27th of February 2020. In a quest to managing the challenges, several protocols such as, social distancing, lockdown, travel restrictions, minimum gathering of people, work from home strategy, hand washing, use of sanitizers etc., in alignment with WHO recommendations were also implemented in Nigeria. Without seeking consent, the pandemic brought about new ways of doing businesses as various seemingly dormant technology platforms were suddenly reactivated.

This was evident from available data for instance, Business of Apps, showed that Zoom Video Communications Incorporation recorded a 685% increase in sales revenue from turnover of $331M in 2018 (pre Covid-19) to $2.6B in 2020. This upward trend in revenue remains applicable to technology counterparts such as Microsoft Teams, Google Class due to rapid increase in their utilisations and other technologies such as the use of drones, Virtual Private Network (VPN) for remote connections and many more which shall be discussed in the latter part of this study. Organisations that have migrated their data to the cloud simply created extended secure access for remote update and retrieval of business data. Companies that had not taken this initiative quickly aligned to the new normal to be accessible and to remain in business.

Amidst all these, Auditors are not excluded. The global challenges have greatly accelerated the attention of Auditors towards the deployment of technologies in managing the challenges posed by the pandemic without losing audit quality. Several professional bodies have also alluded to the fact that, to deliver quality services and remain relevant, the place of technology cannot be ignored. The Institute of Internal Auditors (IIA Global, 2020) in the Global Knowledge Brief admonishes its members to be technically up to date to remain relevant in helping organisations through this unusual time.

The need for Auditor's adaptation to the new normal by embracing technology was also emphasised by The International Federation of Accountants (IFAC, 2020) in its publication on the Summary of Covid-19 Audit Considerations. This study, therefore, shall focus on the examination of how the deployment of technologies has assisted Auditors to cope with the challenges of Covid-19 pandemic.

Statement of the problem

Auditing is a highly regulated profession saddled with so many requirements to ensure quality of work and adequacy to enable the auditors to obtain adequate and appropriate audit evidence from where reasonable conclusions are drawn to support auditor's opinion. For instance, International Standards on Auditing (ISA) 315 requires auditors to identify and assess the risks of any material misstatement through adequate understanding of the entity to be audited and its business environment. Likewise, ISA 500 demands auditors to apply adequate mix of control testing to obtain reliable audit evidence while also paying attention to the entity's going concern following ISA 670 guidelines. Covid-19, through the accompanying

protocols, has made some of these requirements as daunting task for the auditors. So many researchers such as (Khaldoon et al, 2021, Papadopoulou, 2020, Pasupati, B., & Husain, T. 2020) have examined the impacts of the pandemic on audit profession and practice but very few literatures have looked at the ways to manage the crises at hand. It is therefore pertinent to examine Computer Audit and Covid-19 Pandemic Challenges focusing on how technology has created alternative means of executing audit engagements without jeopardising the required quality.

Objectives

This study aims at achieving the following objectives:

1. To examine how the use of technology has helped auditors to successfully manage the challenges of Covid-19.
2. To expand on some useful, but seldom mentioned technologies which auditors can deploy to further ease the execution of audit engagements.

Methodology

This study examined Computer Audit and Covid-19 Pandemic Challenges by looking at how technology has helped to manage audit challenges in pandemic era. In carrying out this examination, exploratory research approach was employed. Relevant information and materials from secondary sources like, government publications, Journals, annual reports, textbooks, library, archival sources, and Internet materials were collected and reviewed. This methodology was used in similar studies by (Owolabi & Izang, 2021), (Owolabi & Adesanmi, 2021) and (Andreaus et al., 2021).

Literature Review and Theoretical Underpinning

Conceptual Framework

The demand for audit services has continued to be on the increase traceably due to third parties' participation and investment in the company who demand accountability from the management as comfort to the safety of their investments in the company. In the work of Wallace (2004) titled 'The Economic Role of the Audit in Free and Regulated Mark', three key hypotheses were used to substantiate the demand for audit: the monitoring hypothesis, the information hypothesis, and the insurance hypothesis.

The monitoring hypothesis considers the willingness of the manager to be monitored as a result of the delegation of decision-making authority as necessitated by the agency theory only when the benefits from such monitoring activities exceed the related cost of downwards benefits adjustment by the principal. The hypothesis further added additional responsibility on the auditors by looking at the economic theory of the principal – agent relationship. It is believed that agents (the managers) will maximise utility by consuming resources beyond the optimal level for their benefits if unchecked. The principal therefore compensates managers who care to put measures in place to checkmate the opportunistic behaviour. One of such measures includes the application of audits Wallace (2004).

The information hypothesis asserts that the services of auditors are required to reduce the level of information risks resulting from the presence of material misstatement in the financial statement. This hypothesis beholds on the auditors to give, in the form of an opinion, the true and fair view of the financial position and the assurance to the reduction of

information asymmetry through adequate disclosure of both mandatory and voluntary requirements which may help users to make informed decisions. The third hypothesis is the insurance hypothesis.

This hypothesis expands auditors' liability as a cover for users of financial statements. The notion here is that auditors are demanded so they may be sued if evidence can be substantiated that a user suffered a loss because of reliance of the audited financial statement which was proven to be materially misstated. The above responsibilities require that auditors carry out their duties with due diligence and with utmost quality some of which have been interrupted by the current global pandemic. Can the place of technology assist auditors to still deliver on these responsibilities? This study is set to answer the question with proofs.

Theoretical Framework

Several theories have been used by authors to explain the demand for audit services such as the role theory (Adeyemi, 2011), stakeholders' theory and the theory of inspired confidence (Owolabi & Adesanmi, 2021). However, this study uses the stewardship theory and Human Capital theory to explain audit practice in Covid-19 pandemic era.

Stewardship Theory

Donaldson and Davis (1989) cited by (Subramanian,2018) presented the theory of stewardship as a normative alternative to the positive agency theory. The concept of stewardship demands the rendering of account of the resources being managed by the stewards who, in most cases, are not the owners of the resources. Management and board of directors across companies globally, have piloted the affairs of their companies to keep this fiduciary responsibility of rendering accounts of their companies through the adoption of technologies that enhance remote working including the holding of virtual Annual General Meeting (AGM) in response to Covid-19 challenges. Though, stewardship theory took a divergence view of the principal – agent relationship by considering managers' willingness to be faithful in the rendering of accounts as a steward, the dichotomy in the credibility of what the managers present to the owners of resources and the owners' notion of self-interest inherent in a typical manager have existed over decades. This gap necessitated the demand for audit services and the accompanying hypothesis as given by Wallace (2004).

Auditors can be seen therefore to have been positioned to bridge the gap between the owners of resources and the steward through their audit attestations and opinions. It is also worth noting that the extent to which auditors can maximise the benefits of technology in audit services is a function of their skills and technical know-how in utilizing technology driven audit tools. Accounting for the effects of audit firms' investment in training auditors to utilize modern audit tools, the human capital theory was examined.

Human Capital Theory

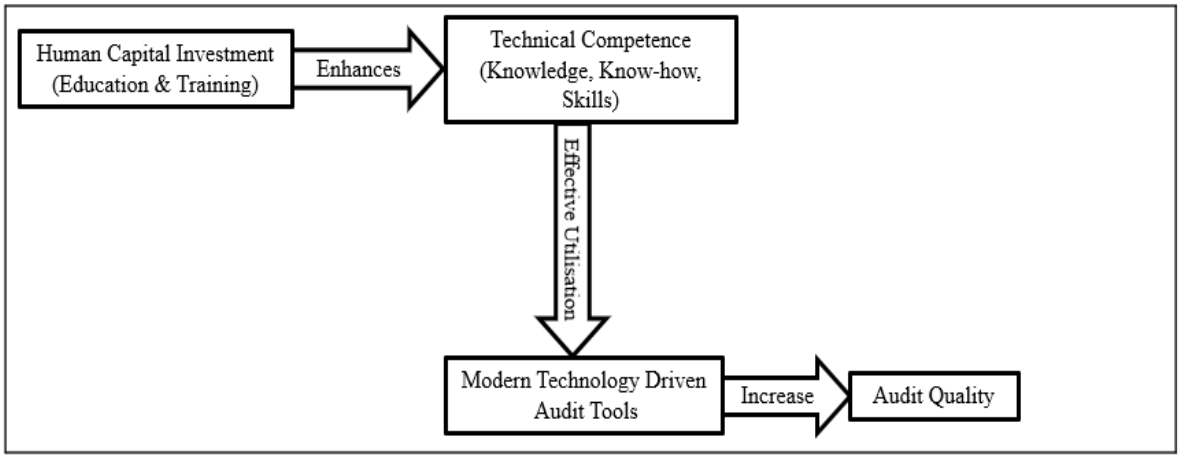
The quest by auditors to reduce expectation gaps and continue to render quality services amidst the pandemic have propelled significant investment into human capital development. On the 5th of December 2019, KPMG announced in a press release, its intention to invest $5 billion on technology, people, and innovations which was slated to span a period of five years. Also, on the 15th of June 2021, The Wall Street Journal (WSJ) published the proposed $3 billion investment in employee training and technology by PwC scheduled for a period of

four years. This has been the trend even among smaller audit firms including Nigeria. The huge investments in human capital across auditing firms corroborated the efforts to ensure adaptability to pandemic era and the relevance of Human Capital Theory to this study in explaining how continuous investment in auditors' technical competence will help to maintain audit quality in this critical period.

Various authors have explained Human Capital Theory as a modernisation to the work of Adam Smith's study of labour as a factor of production (Wuttaphan, 2017). In 1964, Gary Becker published the book on Human Capital having been acclaimed to have developed the most comprehensive and sophisticated theoretical and empirical evaluation of the investment in human by the protagonists like Melvin Reder and Albert Rees (Pedro, 2014). OCED, 2001 defined Human Capital as 'productive wealth embodied in labour, skills and knowledge'. Human capital theory looks at two major areas-the development of individual's capacity through the acquisition of skills, knowledge, technical know-how and the organisation's value optimisation (Marimuthu et al. 2014).

Our Human Capital model in figure 1 shows the interrelationship between human capital investment focusing on training and education and the enhancement of technical competence in terms of knowledge, technical know-how and skills. Adequate combination of these elements of human capital help auditors to develop good understanding regarding the applicability of technology such as Smart Digital Hubs, Drones and Sensor Technologies, VPN, Internet of Things and video conferencing technologies (Zoom, Teams) amongst others for achieving audit quality.

Figure 1: Conceptual Model Linking Audit Quality and Technical Competence propelled by Investment in Human Capital



Source: Authors' own Construct 2021

Empirical Framework

Several authors and experts across the globe have written extensively about the historical antecedent of computer audit, the paradigm shift in tradition, the emerging risks and controls, the general merits and demerits and the need for auditors to enhance their knowledge to remain relevant for what the future hold. (Kiger & Scheiner, 1997) asserted that businesses that fail to embrace modern technology may short live. This speaks to the degree of adaptation and migration of business records and processes from the traditional accounting

systems to a computerized systems with cloud storage platforms. In the past, auditors' skills were limited to manual methods of verification and where applicable, an audit round the computer. Today, the increase volume of data generated by businesses coupled with the complexity of business processes and controls have brought about the use of software applications to aid audits. In modern auditioning, technology is the underlying principle that underpins the way auditors' function and carry out their duties (Knechel, 2000, Manita et al 2020). It is therefore important that auditors acquire necessary skills and exposure to remain relevant (Watne & Turney, 1991).

The different techniques that auditors can use to test the efficiency and the effectiveness of control procedures have also been elaborated by various experts. A very key technique is the use of computer-assisted audit techniques and tools (Best, 2000). Auditors use computer-assisted audit techniques and tools (CAATTs) to help them effectively audit an enterprise system. As the use of information technology (IT) by auditors has increased drastically during the pandemic (Tysiac, K. 2020, Manita et al. 2020), the need for auditors to invest in adequate training is paramount in maximising the benefits of modern technology in audit profession. Table 1 summarises some studies and conclusions.

Table 1

	Conclusion	Authors
i	These authors concluded that the future of auditing is integrated and continuous monitoring of technology-based processes.	Al-Sayyeda et al. (2020), Pave et al. 2020, Alles et al. (2006), Kuhn and Sutton (2006) and Alles et al. (2008),
ii	In this study, the authors supported the fact that technology driven modern techniques and new audit tools are necessary to survive business complexity and the volume of business data being generated today and in the future.	Burnaby and Hass (2009), Vasarhelyi et al. (2004) and Gultom et al. 2021.
iii	Burnaby and Hass (2009) concluded that knowledge on how to use technological driven tools and techniques is very key for auditors' continuous relevance.	Burnaby and Hass (2009). Payne and Mary (2017),
iv	Spathis and Constantinides (2004) alluded to the facts that frameworks and standards are constantly being rolled out to improve existing knowledge in IT auditing and that auditors must familiarise themselves with these frameworks	Spathis and Constantinides (2004).
v	Yang and Guan (2004) concluded that auditors must well understand IT frameworks and guidelines when performing IT audits. This was in line with Spathis and Constantinides (2004).	Yang and Guan (2004).

IT Frameworks Underpinning Computer Audit

Various control frameworks have been developed to guide auditors in the practice of IT Audit. The Information Systems Audit and Control Association (ISACA) defines IT control frameworks as a process of categorizing and identifying controls in a structured manner that adequately secures IT environment. Some of the frameworks include:

- Control Objectives for Information and Related Technology (COBIT) now COBIT 5 issued by ISACA.
- Electronic Systems Assurance and Control (eSAC) published by Institutes of Internal Auditors Research Foundation.

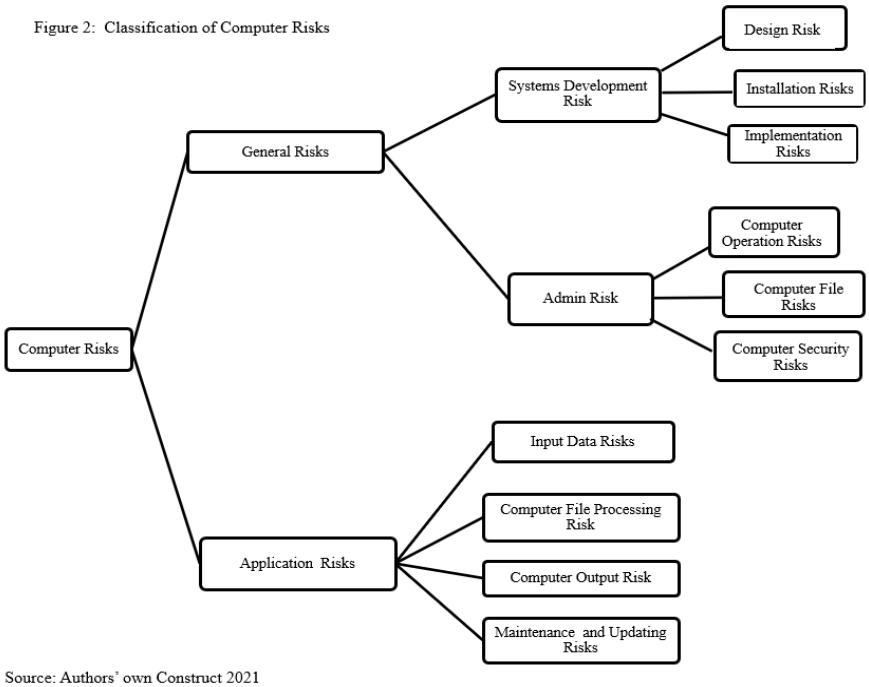
- International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) Series which includes:
- ISO 27001- information security management systems.
- ISO/IEC 38500- Information technology—Governance of IT for the organization.
- IT Infrastructure Library (ITIL)- framework for management of IT as a portfolio of out-sourced services using service level agreements (SLAs) and ongoing processes for monitoring and controlling availability, capacity, configurations, issues, patches, and change management

Computer Environment-The Challenges & Risk

The advent of automated business environment came with numerous merits which includes efficiency, quality and timelines of data processing and information delivery for decision making among others. However, it also came with challenges to both the auditors and the general stakeholders some of which include:

1. Replacement of physical audit trail with data trail.
2. Hardware/software failure.
3. Systematic errors for example errors duplication by faulty codes,
4. Fewer human inputs thereby reducing segregation of duties.
5. Unauthorized access both logically and physically.
6. Authorization creep
7. Remote access to computer programs and backdoors in codes.
8. Cyber-attacks and data manipulations
9. Computer virus, highjacks and distortion to confidentiality, integrity, and availability.

Figure 2: Classification of Computer Risks



Source: Authors' own Construct 2021

Just like a normal machine, computer risks, if not well managed through adequate controls, can be visible at the hardware, software, input, processing, and output level. Auditors

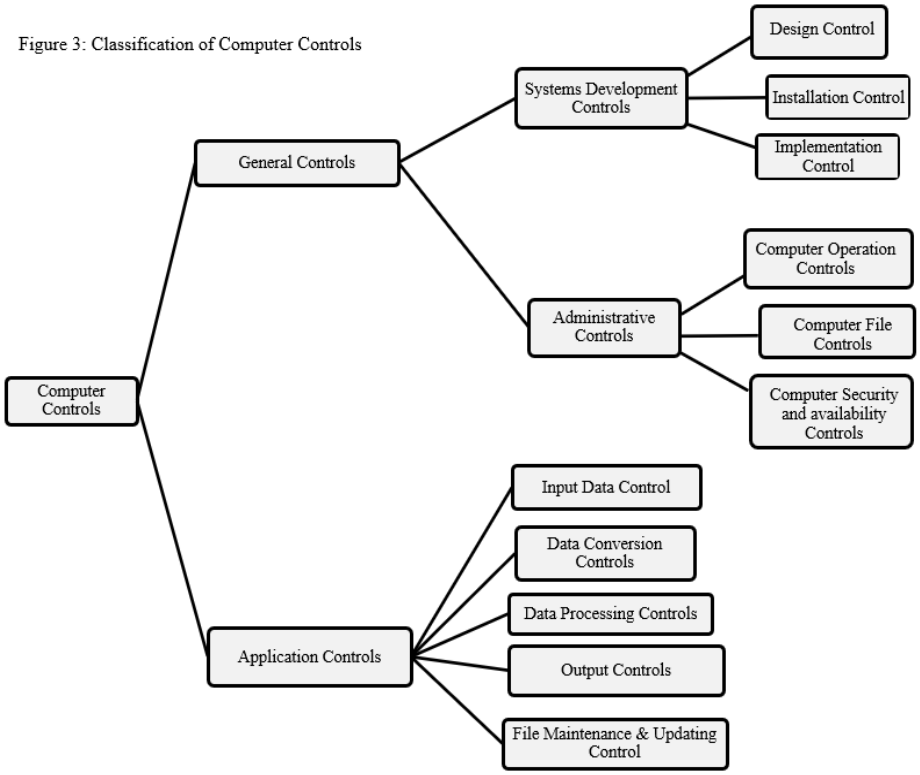
must review this aspect of risks during the preliminary risk assessment stage to familiarize themselves with the risks and thereafter test for the effectiveness of controls put in place to manage the general and application risks as classified in figure 1 above.

The Control Environment

The main objective of control is to mitigate risks. Controls can serve as preventive, detective, compensating or deterrent measures. Auditors must test for existence and effectiveness of controls set by management to manage the risks. Generally, computer controls can be grouped in two broad categories: General Controls and Application controls.

1. General Controls: These are the controls that pertain to all aspects of IT before transactions are processed. There are six categories of IT General Controls: (i) Administrative controls, (ii) Segregation of duties, (iii) Systems Development, (iv) Physical and logical security, (v) Backup and contingency planning and (vi) Hardware controls.
2. Application Controls: These are controls designed for each software application to ensure integrity of the input, processing, output, and maintenance of application master files.

Figure 3: Classification of Computer Controls



Source: Authors' own Construct 2021

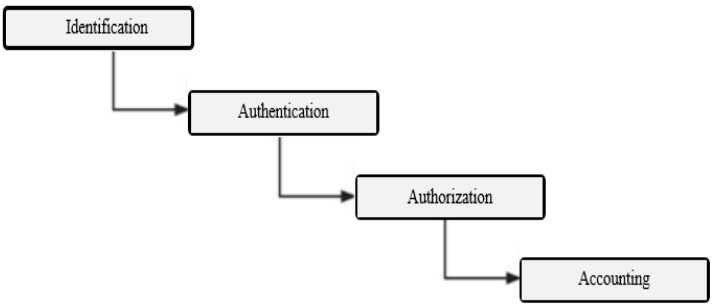
Logical Controls- The I-3As

These are automated control systems that guide against unauthored access to computer applications and resources. The key available for logical access controls is called IAAA.

1) Identity: This is the control that seeks to identify the intended user of IT resources using username and password.

2) Authentication: Here, the computer converts the username and password to hashing (irreversible encryption) and compares it with the already stored data that the user supplied at the point of information enrolment.
3) Authorization: Once the hash digest matches the details in the database, the user is allowed into the platform to carryout online activities.
4) Accounting: This captures the logs of all activities carried out by the users.

Figure 4



Source: Authors' own Construct 2021

Approach to Computer Audit

An audit approach is the strategy used by an auditor to conduct an audit. In a computerized environment, there are three basic approaches for auditors:

(a) Auditing Round the Computer: This is a black box audit approach where the auditor believes that reliable and sufficient evidence can be obtained by reconciling the input with the output.
(b) Auditing Through the Computer: With the use of computer assisted techniques, the auditor ascertains the completeness, accuracy, and validity of the controls in computer processing by directly examining the program processing procedures. Here, the auditor tests the design and effectiveness of the controls embedded within the application. Auditing through the computer attempts to achieve two main objectives: first, the verification of the adequacy of the processing controls built into the accounting application program; and second, an assurance that the accounting data are processed in an accurate manner (Moscove et al, 2003).
(c) Within the Computer Audit Approach: This approach utilizes audit embedded facilities such as integrated test facilities (ITF) and Computer Aided Audit Technique (CAAT) to evaluate the internal working processes and controls with the aim of ascertaining the reliability levels that can be placed on the computer program.

The Concept of CIA Triad

One of the key theories that summarize cyber security assurance is the CIA. Auditors must be aware and pay adequate attention to the controls around confidentiality and integrity of data and information with a thorough review of the controls to ensure continuous availability. The overall auditors' level of assurance over financial and non-financial information will rest on the robustness of the organizational CIA triad.

a) Confidentiality ensures that company's classified data, resources and objects within corporate networks, applications and databases are protected from undue exposure and are only accessible to authorized individual on a need-to-know relevant for each user. This component of triad has become the big targets of hackers during the pandemic and remote working environment which auditors must review for compliance.
b) The Integrity concept of CIA serves as control to prevent unauthorized alteration to data and business transactions within the systems. When auditors' testing for integrity signifies a high overall assurance, the auditors can be comfortable as to the reliability and correctness of the data to be analyzed.
c) Availability considers controls to ensure continuous and uninterrupted access to IT business resources. On the 5th of October 2021, various local and international broadcasting stations and newspapers like the Guardian newspaper, Financial Times, BBC and CNN reported non-availability of Facebook, Instagram and WhatsApp which resulted into a loss of over $7B with a crash of stock price by 5.5% all within 6 hours. This signifies the importance of controls around availability to which auditors must continue to pay attention as the key tenets of CIA triad are more threatened in a computer environment.

Discussion

Covid-19 has rapidly increased business risks and uncertainties across the globe. Even though Management and the Board of directors are more careful by critically analysing economic indicators and weighing their options before embarking on investment, they have continued to inject investors' fund into business operations to maintain going concern. Amidst Covid-19 pandemic, the need for audit services has been a must to comfort investors in the fooling areas: Internal controls: The disruptions from covid-19 have created a lot of adjustments in the ways transactions are being carried out. The physical transaction authorisation and approval are gradually being replace by online approval and email authorisation with related cyber security risks. Pre-covid contracts and agreements were remodified in response to the pandemic which has capacity to open up company for legal litigations and capital loss, financial forecast and business estimates were also affected due to uncertainty to the underlying assumptions in the estimates. Quality of underlying data for future cashflow to sustain business obligations and operating models for going concern were also disrupted.

These unending disruptions to accounting information and the underlying assumptions coupled with regulatory requirements have continued to necessitate the need for independent auditors. Auditors, on the other hand, have devised various methods of achieving a thorough review to satisfy their professional scepticism through the application of technology. Very common tools include the use of drones and sensor technologies for carrying out inventorying and assets verifications where physical presence is permissible due to covid-19 pandemic. Video conferencing technologies majorly Zoom, and Microsoft Teams were used for client opening meeting, preliminary audit process and interview to obtain explanation about process changes, organisational changes and many more. Auditors also leverage on Virtual Private Network (VPN) to remotely connect to organisational applications in order to retrieve, analyse data and view support documents such as approval, authorisation and other audit evidence. Other commonly used technology by auditors includes Audit Applications and analytics, IT Productivity Tools etc. Organisations readiness through cloud computing has greatly assisted

auditors to have easy remote access to corporate information during audit enjoyments. Migration of corporate data to the cloud has witnessed widder attention even before the pandemic. The advent of covid-19 has further necessitated the need to for company to migrate their data. Auditors must have good understanding of business process and the technologies that drive the processes both within the entity's internal and external IT environment and test the related controls for existence, adequacy, and effectiveness.

The Use of Drones, Sensor Technologies, and Internet of Things (IoT)

The Internet of Things (IoT) are the new and constantly growing innovative number of devices (smart homes, cars, equipment etc) and sensors, antenna, or microcontrollers connected through the Internet Protocols of which drones is aerial component. The pandemic has increased the visibility of drones, sensor technology and internet of things globally and in every profession including the Big Four. In 2019, PwC announced its open cast mine stock-count audit of the energy giant RWE AG using drone technology where drone was able to enhance accuracy by capturing about 900 data points per cubic metre there by enhancing the calculated volume of the coal reserve within two centimetres and reducing the count by more than three hours compared to the time taken for traditional count. Drones have also been used to provide a more efficient monitoring and sites management including giving insights into the existence, locations, and verification of other assets.

Cognitive Technology and Audit Quality

Cognitive technology, which can also be referred to as artificial intelligence, has the capacity to view through vast transaction data, recognises patterns and exceptions and performs digital analysis of the data in such a way that the audit team may find impossible to achieve with the natural human understanding. Cognitive technology uses algorithm that enhances applications to absorb information, reason in ways that mimic humans while bringing our exceptions in patterns and frequency of occurrence. It also embraces machine learning which allows for possible solutions to issues using previous experiences from previous challenges and solutions. Auditors can leverage on cognitive technology to re-design their work during this pandemic in order to carry out analyses of both structured and unstructured data in ways which the normal traditional audits may not achieve.

Predictive Analytics

Predictive analytics employs advanced techniques of data analysis to project and predict based on future probabilities by combining advanced technologies like artificial intelligence, quantum computing, machine learning etc to process those predictions and formulate high level reports for decision. With regards to high quality audit, auditors can utilize digital tools to extract data from an organization's databases, and then run the data through predictive analytics to identify patterns that align and exceptions that fail to align with expected outcomes and trends. Key advantage of using predictive analysis is the auditors' ability to gain greater insight into the client's risk environment both business and financial. Auditors have a better understanding of the client's data when subjected through a predictive technology in addition with industry or market data

Smart Digital Hubs

Smart Digital Hubs serve as platforms where auditors can utilise analytics, automation, and data visualization to work real time and from remote locations. Auditors, however, are yet to optimise the utilisation of these small platforms, they are technologies that can help auditors to keep up the audit quality without impact on the scope and deep of review because of pandemic. For smart Digital hubs platform interface to work effectively well, it must be agile and cloud-based environment compatible. The configuration must factor in scalability to support integration into innovations and anticipated growth and expansion.

Other Technologies that Auditors can Leverage

a. Distributed Ledger Technology (DLT)
b. Deep Learning (Dl)
c. Natural Language Processing (NLP)
d. Machine Learning (ML)
e. Artificial Intelligence (AI)
f. Robotic Process Automation (RPA)

Conclusion and Recommendation

It is no doubt that the world has witnessed disruptions in all facets including the auditing profession due to the pandemic. However, the reliance of the users of financial statements on auditors for continuous monitoring and communication of comforts regarding the credibility of financial figures has rather increased despite the challenges posed by the pandemic. To minimise users' expectation gaps by sustaining or even improving on the quality of services delivered by the auditors in this pandemic era, adoption of technology is inevitable.

Available literature and experience have shown that the COVID-19 pandemic has drastically prompted the adoption of cloud accounting, remote audits and use of audit technologically driven tools in organizations both globally and in Nigeria. This became achievable largely due to continuous migration of corporate data to the cloud and the impact of cloud accounting on corporate data. This study discovered a very high indication that the adoption of technology will be sustained in the future as more innovations in technology continues to roll in and as more companies continue to migrate their operations to the cloud in readiness for the future. Auditors must continue to be aware that as technology innovations seek to solve business challenges, the accompanying technology risks that threaten organisational confidentially, integrity and availability such as ransomware, advanced persistent threat, vulnerability exploit, and threats to cloud and internet of things, threat to enterprise landscape and other covid-19 induced cyber scam will continue to be on the increase. Auditors must therefore have adequate understanding of the client's environment, carry out adequate test of controls and satisfy themselves with the existence and the effectiveness of those controls.

Studies such as (Manita et al., 2020; KPMG , 2021 and Tysiac, 2021) have recommended the need for auditors to continue to leverage technologies by using data analytics and modern auditing tools in the planning and execution of audit engagements to enhance audit quality and to create reliable evidence to justify their audit findings. Based on the above, this study recommends:

- Auditors' continuous reliance on technology and the activation of modern audit tools such as cognitive technologies, predictive analytics, continuous auditing, and more use of

drones to enhance audit quality and to sustain credibility of financial information as the world manages Covid-19.

- The need for auditors to be mindful of hidden and complex technology risks by heightening and maintaining professional scepticism as they draw data and manoeuvre through systems integrated business environment.
- Auditors' investment in training for adequate understandability and value maximisation of modern technologies in audit.

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