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*Innovation and Sustainable Business: Exploring the Role **of Artificial Intelligent in Nigeria Post Covid-19***

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Abstract

This paper conceptualises the role of technological innovation using Artificial Intelligent (AI) to sustain business operations by Nigeria businesses. This is because most of the businesses in Nigeria except banking services, use manual mode of operation. AI is the process of using automated technologies to carry out business activities by companies. These activities may comprise logistics, production, delivery and the like undertaken with the aid of human supervision. The use of AI by businesses might help them to achieve competitive advantage in terms of lower production cost, qualitative products and services delivery, customer satisfaction, expand market share and increase turnover. Despite the negative side effect, technology might have on general employment level, it is argued that AI might probably complement human labour. The effect might help in increasing overall business efficiency, following the COVID-19 epidemic on global economic activities and Nigerian inclusive. Nigerian businesses face a serious problem of not being able to sustain their operations due to high dependence on manual system of operation. Therefore, considering an alternative option of operation (automation) becomes paramount. This paper is a content analysis based on existing literature pertinent to the role, which AI hopes to play in sustaining business activities in Nigeria. Hence, Nigerian policy makers should give considerable attention to the development and use of innovative technology pertinent to its business environment that will simplify business activities.

Key words: *innovations, businesses, covid-19, artificial intelligent, efficiency*

Introduction

The technological innovation of the recent and that of the time immemorial had bring a significant change in the life style of most individual across the world. This necessitate companies to explore more ways of delivering better and qualitative products and services to their customers (Sudtasan&Pitivaranun, 2019).Although the use of innovative technology might cause threat human employment opportunities, but it is of paramount important to success in today's competitive world. However,Kitahara& Shinozaki (2019) suggested that the effect which technology might have on labour employment depends on the assign responsibilities and the task to be perform. This is because some notable business responsibilities such as call centres, management accounting, secretariat work,customer service, drivers, bill collectors and operators to mentioned but few depend largelyon labour efficiency, productivity and production cost (Sudtasan&Pitivaranun, 2019).

However, the technological revolution of the last century mark the mark the turning point in the use of robot by major companies of the world to replace the use of manual responsibilities which are harmful to human life (Tasioulas, 2020). This allow companies the continuous use of robot in their operations in order to cut down cost and increase their market share through efficiency. Although, it started in the manufacturing sector but now it cut across all sectors of the economy (Webster &Ivanov, 2019). Despite internal operation by companies, the use of artificial intelligent will allow companies to maintain cordial relationship with their customers and other stakeholder groups. The development also further avail researchers to predict the potential of replacing human labour with artificial intelligent in period to come (Webster &Ivanov, 2019).

In view of the above technological development the question now remains that, how is the society as a whole going to adapt to the challenges of the artificial

industry development and its implication to labour market?

The concept of Artificial Intelligent

AI origin is credited to the work of John McCarthy, who began research on the subject in 1955. He based his assumption of the fact that the domain of intellectual learning is precise, whichcan be influenced by the help of a machine. Artificial intelligent is the process of given a machine or similar object ability to learn, think and act on a phenomena or situation. Itis considered as an interdisciplinary research field that gains special attention in society (Vinuesa et al, 2020; Reis, Santo &Melão, 2019). AI works through understanding language, contextual context or voice recognition of human beings, which will be process into an information in the later period. It is argued that machine had the potentials of solving task intellectually with the help of feed-in data set-up rules (Velarde, 2019; Wisskirchen, et al, 2017; Dirican, 2015).

However, there is contention about the efficiency and effectiveness of using AI against human labour (Sudtasan&Pitivaranun, 2019). This is becauseAtalay, Phongthiengtham, Sotelo, &Tannenbaum (2018) in their study opined that AI influences workers attention from routine task, which created a great inequality in income distribution. In contrast to this argument, Roubini(2014) and Stiglitz(2014) postulates thatthe risk of higher unemployment rate due to the introduction of AI could be reduce by the efficiency, effectiveness and economics to be created by the use of robots and computers.Wisskirchen, et al (2017) states that there are two kind of AI, namely weak AI which is merely the computer instruments and the strong AI that help the computer instruments with intellectual capability.

AI and employment opportunities

It is argued that the introduction and use of AI technology might pose employment threat in both national and international labour market (Ernst, Merola&Samaan, 2018; Korinek and Stiglitz, 2017; Méda, 2016). Because AI is to replace the position of human being in the performance/discharge of various industrial and office responsibilities. Meanwhile, Ernst, Merola&Samaan (2018) assertthat the 2015 report by MerrillLynch bank in America pointed out the potential rise in inequality because of increasedautomation. Although, the need for replacement of labour in one sector of the economy created many opportunities in the other sectors. A common example of this is the migration of unskilled labour from agriculture to manufacturing, mining, service and construction industries that require effective division of labour (Ernst, Merola&Samaan, 2018).However, Kiggins, (2018) is of the view thatimplementation of AI products will create a new socio-economicatmosphere,which will group the society into winners and losers. The economy will be such that will marginalised unskilled and semi-skilled labour in the production processes(DeCanio, 2016).

Types of AI

Development and operation of AI system was basically grouped into four main part: responsivetechnology, limited memory, theory of mind and self-awareness

- Responsive technology

  This is the basic type of AI, which does not depend on previous in-built data and experience for the purpose of taken future decision. Responsive technology operate by repeating same operation time over time. Machines developedbased on responsive technologycannot be easily use for another purpose due limited concepts of the wider phenomenon.

- Partialretention

This type of AI as the name implies is designed to operate with limited in-built date to facilitate future operation of the system. This in-built date enable the system to observe situations after identifying and monitoringa given phenomenon.

- Philosophical attention

- Natural consciousness

  This is a stage of AI development, which is design to give representation, analysis and description of itself. This AI possess human behaviour in such a way that it can describe itself and the environment where it operate. So it built on past experience using memory and the theory of mind.

Stages in the development of AI

According to Velarde (2019), research and scientist in mid of nineteenth century realised the need to subject machine in various aspect of life and human endeavour. This was reinforcedby digital revolution with advent of computer. The result of using computers and machine out performs that of human labour due to its efficiency and effectiveness in handling assigned task. But this is constrain by lack of intuitive capability from the side of machine/computer (Arel, Rose &Karnowski, 2010). The most commonly used example of AI includes robots, drones, driverless cars, and games. These examples pass through the following stages as reported by Velarde (2019):

- Supervision and recommendations

  AI processes and products should be scrutinised effectively in order to identify any area of technical problem. The scrutiny will help developers in passing out critical recommendation, so that subsequent development and operation may by easily and efficient.

- Continuous learning

  Supervision and recommendation of processes and products will compel developers to strengthen

identified areas of weakness through the process of continuous learning and on the job training.

- Demonstration

  This is a testing stage, which entails presentation of the prototype products and the processes to assess their viability and effectiveness.However, Velarde (2019) lamented that some applicationsend-to-end approaches do not outperform some standard techniques.

- Computational imagination
- Interaction

  This is the process of subjecting the machine into intellectualreasoning of a given phenomenon. So it approve feasible for the performance of the task, it should be set for testing.

- Ethical consideration

  AI products and processes should be design within the purview of what is acceptable to the norms and culture of society. All issues of risk, bias hazard need should also be address to avoid any possible legal threats, which might arise from employees and customers dissatisfaction.

Pillars of an ideal AI

For an effective service delivery and functionality, AI require supporting mechanisms that will help it provide the optimal output. This necessitate the system to coexist and relate to each other while at same control by human capacity (Wisskirchen, et al 2017). To this end, the following might be require in order to achieve optimal AI performance:

- Ability for independent learning by the AI system to enable thorough synchronization of the individual components.
- Designing of a comprehensive and workable plan, so that all route connecting the individual component are clearly stated with their function, requirement and possible risk areas.

- The system should be design in such a way that it possesshumancharacteristics, which will enable it to read, interpret, understand, analyse and adapt to a given situation.
- The system must be design the suit individual user need.

AI in Nigeria

The installation of ATM machines by banks that enable their customers withdraw money and the use of internet of a thing mark the beginning of the use of AI technology across the country.This development followed the digitalization of financial transactions and the recording phase of all office work (Agidi, 2019).Nevertheless, today the development cut across various sector of the the country, where academic environment join the tempo by embarking into e-registration and e-learning. This became apparent especially with emergence of COVID-19 pandemic, which seriously restricted movement and led to the close of schools.

Advantages of robotics and AI

In today's competitive world economy, it is of high important for companies to explore ways of enhancing their operations, products and services quality, boost employees morale and more importantly increase market share. This may possible through restructuring and downsizing mode of operation. To this end introducing AI by companies, might have a lot of benefit to them. These include but not limited to the following: accuracy, speed, availability, digital assistance, cheap, continuous operation, objective and standardised operation and effective control mechanism.

Challenges

The introduction of AI into daily business affairs might pose some threat not only to the companies,but also to the larger world in general. Some of these challenges may include:

i) Initial set-up Cost

As in most case, set-up cost of any development turn out to be

high, which normally posed introduction threat to mostly lower business group. In addition to this, as usual to computer components, there is need for regular update of the system to keep face new development and overcome possible break through threat.

ii) Making Humans Lazy

The use of AI technology instead of human might possibly demoralised human effort, thereby making them lazy and frustrated. This is might possibly weaken the innovation ability of the future generations.

iii) Unemployment

Since AI technology now became human substitute, there is possibility of loss of job by majority of unskilled labour in particular. Because human interface might not going to be relevant.

iv) No Emotions

There is possibility of loss of interrelationship that existed between units of an organisation following the introduction of the AI technology. Thus losing the potential benefit of teamwork and management.

v) Irrational

AI technology might turn out to be ridiculous, because they set out to perform a specific task only, hence making them not to make rational decision in situation of possibilities.

Summary and conclusion

AI is the process of using automated technologies to carry out business activities by companies. These activities may comprise logistics, production, delivery and their like undertaken with the aid of human supervision. The use of AI by businesses might probable help them to achieve competitive advantage in term of lower production cost, qualitative products and services delivery, customer satisfaction, expand market share and increase turnover.

Despite the negative side effect, technology might have on general employment level, it is argued that AI might probably complement and substitute human labour. The effect might help in increasing overall business efficiency. However, following the COVID-19 epidemic on global economic activities and Nigerian inclusive. Activities in Nigerian faces serious problem of not being able to sustain operations due to high dependent on manual system of operation. Therefore, considering alternative option of operation (artificial intelligence automation) become of paramount important. Hence, Nigerian policy makers should give considerable attention to the development and use of innovative technology pertinent to it business environment that will simplify business activities. This might be possible by paying attention to impending obstacles facing technological advancement, such as poor research and development in modern innovations, ethical consideration in the use technology, legal and regulatory framework governing the use technology worldwide and expert development and training.

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