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THE NEXUS BETWEEN UNEMPLOYMENT, EMPLOYABILITY, AND GLOBALLY PENETRABLE SKILLS IN AN AI-DRIVEN WORLD: PERSPECTIVES ON SELF-SUSTENANCE IN NIGERIA

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Abstract
This paper examines the evolving landscape of unemployment, employability, and globally penetrable skills within the context of artificial intelligence (AI) in Nigeria. As AI reshapes the global economy, its impact on the labor market necessitates a reassessment of the skills required for sustainable employment. It adopt qualitative and quantitative methods to analyse its study. 2,537,400 persons consists the population of study. A sample of 399 was elicit using Taro Yamene's formula. Structured questionnaire titled 'Unemployment and Employability Driven by AI Questionnaire' (UEDAIQ) was use for data collection. Findings indicates that Artificial Intelligence AI has displaced many persons in the labour market as a result of their inability to upgrade and manipulate modern technological devices. The paper recommends strategic frameworks for enhancing employability and economic resilience through AI-centric education and policy reforms, establishment of AI innovation Hubs, provision of incentives for AI-Driven Enterprises: enhanced Public-Private Partnerships in Education, introduce comprehensive workforce retraining programs and provide policy framework for ethical AI use.

Key Words: Artificial Intelligence, Unemployment, Employability, Global, Skills

Introduction
The globe has experience an unprecedented change in all facets of human endeavour driven by robust level of science and technology. In comparison between African

continent and European states, it is imperative to state unequivocally that science and technology has created unemployment for African states. Whereas, European states enjoy employability and consistent penetration of skills through Artificial Intelligence (AI). A situation where able bodied men who are capable and seeking for job but could not secure it is alarming in Africa, and by extension Nigeria. In an attempt to make ends meet, this has caused series of debilitating socio-economic quagmire such as poverty, kidnapping, killing, yahoo, prostitution, militancy, stealing, cohabitation, gross underdevelopment etc.

Unemployment is mostly caused by changes in technology in our social institutions as machines now substitute human or manual services. Production becomes exponentially high and, specialization is encourage. Buying, selling, management and distribution of goods and services is encourage online thereby creating more jobs and employment opportunities.

The Nigerian education system had also contributed enormous unemployment rate. The system is built on grammar oriented and preference to paper certification. Other flaws in the education industry as contributor to this social menace includes examination malpractice, incessant strikes and lack of professionalism (Igwesi, 2016). Asuka (2013) posits that because ethnicity, preferential recognition during recruitment and employment are given to undeserved and unqualified applicants as encouraged by the political culture, many persons fell into the unemployed margin. This has caused employment deadlock to many citizens, roaming aimlessly in the streets and cities of Nigeria.

Adebowale (2019; Brynjolfsson, 2014) stated that government policies through her National Policy on Education and curriculum is another parameter that encouraged unemployment. Government Policies by several administration such as National Poverty Alleviation and Eradication programme, Graduate Internship Scheme, N-Power, Trader Moni etc designed to help the unemployed is often hijacked by the political leaders. The national policy on education does not envisage education and technical change in the social order. This has made some discipline inert and unable to contribute meaningfully to the individual and society. Unlike the Western nations were such government welfare policies were evenly distributed to all qualified and deserved persons. Here is of the where AI play dominant role in bridging the gap unemployed and employed by injecting globally penetrable skills to its various citizens. More worrisome is lack of skill and manpower training in Artificial Intelligence discipline has been another driver that inhibit employability.

Nigeria, with its significant youth population, must address the dual challenge of harnessing the potential of its human capital while simultaneously mitigating the risks of technological unemployment (National Bureau of Statistics, 2021). The urgency for this becomes clear considering the potential of AI to both eliminate traditional jobs and create new ones that require advanced competencies (World Economic Forum, 2021).

As the global labor market undergoes rapid transformations due to advancements in Artificial Intelligence (AI), the concept of employability is evolving. Traditional skills remain important but are increasingly complemented by a need for digital literacy and AI-related competencies. These competencies are not just desirable but essential for navigating the new landscapes of employment that AI is creating (Schwab, 2016).

In Nigeria, this shift necessitates a significant transformation in educational curricula and vocational training programs to align with the emerging demands of the AI-integrated job market. Critical skills that are gaining importance include machine learning, data analytics, AI ethics, and cybersecurity. Machine learning and data analytics skills enable individuals to contribute to and oversee AI systems, which are becoming central to sectors like finance, healthcare, and urban planning (Bughin et al., 2018). AI ethics is another crucial area, as it ensures that the deployment of AI technologies aligns with ethical norms and societal values, which is particularly relevant in diverse societies such as Nigeria (Floridi et al., 2018).

Globally Penetrable Skills for Local Markets

In the context of globalization and rapid technological progress, certain skills have emerged as universally valuable, yet are particularly beneficial when tailored to local market needs. For Nigeria, cultivating a workforce that is equipped with these globally penetrable skills is crucial for tapping into international markets while addressing local economic and social challenges. Some fundamental pivotal skills that can enhance globally penetrable skills for local markets in Nigeria include; technological fluency, project management, and entrepreneurial acumen, adaptive learning systems, and continuous professional development emphasizing how they can be adapted and applied within the Nigerian context.

Technological Fluency: In the digital age, skills related to data literacy, software development, and AI management are in high demand globally. For Nigeria, developing these skills is not just about participating in the global economy but also about solving local problems such as improving healthcare delivery through data analytics or enhancing agricultural productivity through AI-driven technologies (Jain et al., 2020). Continuous professional development in these areas, facilitated through online platforms and local tech hubs, can keep the workforce abreast of technological advancements and application methodologies.

Project Management: As projects become more complex and globally integrated, the ability to manage and lead projects effectively becomes crucial. Project management skills enable individuals to oversee projects from inception to completion, ensuring they meet budget, time, and quality specifications. For Nigeria, effective project management is essential in sectors like construction, where large-scale infrastructure projects require precise coordination and execution (Olawumi & Chan, 2018).

Entrepreneurial Acumen: Entrepreneurship is increasingly recognized as a vital skill in driving economic growth and innovation. In Nigeria, entrepreneurial skills can help leverage AI technologies to create start-ups that address local needs while being globally competitive. For instance, fintech start-ups in Nigeria have gained international recognition by addressing local financial inclusivity challenges through technology (Nambisan, 2017). Encouraging an entrepreneurial mindset through education and supportive policies can foster a culture of innovation and self-sustenance.

Adaptive Learning Systems: The concept of adaptive learning, where educational approaches are personalized based on learner needs and pace, is vital for upskilling at scale. Implementing adaptive learning technologies in educational institutions and corporate training

programs can help rapidly upskill the Nigerian workforce to meet changing job demands (Li & Lalani, 2020).

Continuous Professional Development: In an era of continuous technological change, professional development cannot be a one-time event but a lifelong process. For Nigeria, establishing continuous learning pathways that include certifications, workshops, and online courses can ensure that the workforce remains competitive and adaptable to new technologies and global market demands (Billett, 2019).

Statement of Problem

Artificial Intelligence AI is an ideal practice in our contemporary system as it will generate massive job opportunities for our citizens. It will also facilitate learning and promote business growth and expansion. However, it is bequeath with multiple flaws in our education system and society. The Nigerian educational system faces both challenges and opportunities in adapting to new realities. One of the main challenges is the existing educational infrastructure, which may lack the resources to integrate advanced technological subjects comprehensively (Adebowale, 2019). Additionally, there is a shortage of qualified teachers and trainers who are proficient in AI and related fields, which further complicates the process of curriculum adaptation (Oyelaran-Oyeyinka & Lal, 2020). The present unemployment is orchestrated by AI is not encourage as well.

However, these challenges also present opportunities for the present generation. For example, the introduction of AI-related subjects into the curriculum can be phased in through partnerships with tech companies and international educational organizations, which can provide both resources and expertise (World Bank, 2021). Therefore, this paper intends to examine the double role play by AI and its relationship between unemployment and employability in Nigerian social institutions

Aims and objectives of the Study

The purpose of this study is to investigate the nexus between unemployment, employability, and globally penetrable skills in an AI-Driven world: perspectives on self-sustenance in Nigeria. Specifically, it intends to achieve the following objectives:

1. To examine the role of Artificial Intelligence and unemployment in Nigeria social institutions
2. To investigate the role of Artificial Intelligence and employment in Nigeria social institutions.

Research Questions

The following research questions were posed to guide the study.

1. Does Artificial Intelligence cause unemployment in Nigeria social institutions?
2. What are the job opportunities with the introduction of Artificial Intelligence in Nigerian social institutions?

Methodology

The study adopted descriptive survey. The target population of the study consists of 2,537,400 persons from five Federal Ministry, Development, and Agencies (MDA's) (Federal Ministry of Health, Arts, Culture and Tourism, Agriculture, Industry, and communication). A sample of 399 was drawn using Taro Yamene's formula. Ten (10) item structured questionnaire known as 'Unemployment and Employment Driven by AI Questionnaire' (UEDAIQ) was use for data collection. The instrument was based on four points rating; Very True VT (4points), True T (3points), Not True NT (2points) and Not Very True NVT (1point). The data collected were analyzed using mean statistics for research questions.

Research Question 1: Does Artificial Intelligence cause unemployment in Nigeria social institutions?

Table 1: Mean analysis on Artificial Intelligence as driver of unemployment in Nigeria social institutions?

S/N	Item	VT	T	NT	NVT	FX	N	Me	Decision
1	AI takes the job of film editors	130	100	80	90	1070	399	2.7	Agree
2	AI replaces humans in advertisement	150	120	60	70	1150	399	2.9	Agree
3	AI replaces humans in telecommunication	170	140	50	40	1240	399	3.1	Agree
4	AI substitutes humans in healthcare service	110	150	80	60	1110	399	2.8	Agree
5	AI replaces humans in agriculture sector predicting pest outbreak	70	90	140	100	930	399	2.3	Agree

Source: Field Survey, 2024

The results on table1 shows that items from 1 to 4 have a means scores of 2.7, 2.9,, 3.1, and 2.8 respectively. The mean scores fell above the criterion mean of 2.5. This indicates that respondents agreed as follows; Artificial Intelligence (AI) has taken the place of human beings as film editors, advertisement, telecommunication, healthcare services. This implies that Artificial Intelligence has cause unemployment in Nigerian social institutions. Whereas, AI is yet to break the jinx in agricultural sector as item 5 obtained a mean score of 2.3 which is below the criterion mean of 2.5. This means that AI has not replace manual in the agricultural industry

Research Question 2: What are the job opportunities with the introduction of Artificial Intelligence in Nigerian social institutions?

Table 2 Mean analysis on the job opportunities with the introduction of Artificial Intelligence in Nigerian social institutions?

S/N	Item	VT	T	NT	NVT	FX	N	Me	Decision
6	AI has facilitated architectural design in building	160	120	55	65	1175	399	2.9	Agree
7	AI has facilitated healthcare services in Nigeria	174	126	40	60	1214	399	3.0	Agree
8	AI has enable provide jobs in the communication sector	189	143	28	40	1281	399	3.2	Agree
9	AI has promotes efficiency in the education sector	149	168	49	34	1232	399	3.1	Agree
10	AI has encourage more participation dramaturgy	156	170	32	42	1240	399	3.1	Agree

Source: Field Survey, 2024

The results on table 2 indicates that all items have mean scores of 2.9, 3.0, 3.2, 3.1, and 3.1 respectively. The mean scores fell above the criterion mean of 2.5. The results revealed that the respondents agree on the following; that Artificial Intelligence (AI) has created employment in architectural design and building, facilitated healthcare services, provides massive jobs in telecommunication, enhance education efficiency, and encourage dramaturgy. This implies that AI has created more jobs in Nigerian social institutions.

Discussion of Findings

Plethora of studies have revealed that unemployment growth rate is exponentially high in Nigerian society. This is due to the nature of education and technical change in our social system. Artificial Intelligence AI displaced a lot of persons as a result of failure to update their skills with a view to key into contemporary ways and means of rendering socio-economic service to mankind (Yucong & Christophe, 2011).

Russell & Norvig (2010) posits that AI has taken the role of humans in hospitals, telecommunication, aviation, business, oil exploration, drama and movie shooting, graphics and design, editing, plagiarism and research, advertisement, etc. This may have been partly responsible for brain drain in Nigeria and in general Africa. Economic activities are going on daily but people find it difficult to participate. Reason being that AI has made deficient and paralysed in area of specialization.

In same vein, AI has create more employment opportunities to many persons who can tap into this modern technology as such people can conveniently program devices used and manipulate without assistance in all our social institutions. Sowa (2000) asserts that, AI engineers can develop applications and systems that helps organizations become efficient.

This will aid to cut costs, increase productivity and maximized profit as well as making business recommendations.

Conclusion and Recommendations

The interplay between AI, employability, and unemployment in Nigeria presents a complex array of challenges and opportunities. This paper underscores the imperative for strategic planning and concerted action to harness AI's potential for economic development and job creation. By prioritizing education reform, skill acquisition, and innovative policymaking, Nigeria can mitigate the risks associated with AI and capitalize on its benefits.

Education reform is particularly crucial; our findings suggest that aligning educational outputs with market needs is essential for preparing a workforce capable of thriving in an AI-enhanced job market. Moreover, the establishment of AI innovation hubs and incentives for AI-driven enterprises, as discussed, can catalyze the development of new industries and job opportunities.

To effectively navigate the transition to an AI-driven economy, Nigeria must also invest in continuous learning and re-skilling programs, ensuring that the current workforce is not left behind. Policy frameworks must be developed to guide the ethical deployment of AI, ensuring that advancements in technology promote inclusivity and equitable growth (Floridi et al., 2018).

Recommendations

Addressing the complex challenges posed by the nexus between unemployment and employability in the AI era demands robust and forward-thinking policy interventions. This section outlines a multi-tiered approach that involves collaborative efforts among government, academia, and the private sector to drive the integration of AI technologies while mitigating associated risks. The recommendations aim to foster an ecosystem conducive to economic growth, innovation, and inclusive job creation in Nigeria.

Establishment of AI Innovation Hubs: AI innovation hubs can serve as catalysts for technological and entrepreneurial development. These hubs, strategically located in major cities and educational centers across Nigeria, would support start-ups, offer training programs, and facilitate research and development in AI technologies. Drawing on the success of similar models in countries like India and Kenya, these hubs could be instrumental in nurturing a culture of innovation and practical problem-solving (Ndemo & Weiss, 2017).

Incentives for AI-Driven Enterprises: To encourage investment in AI-driven solutions and start-ups, the government could provide tax incentives, grants, and funding opportunities specifically targeted at sectors where AI can have significant impacts, such as healthcare, agriculture, and financial services. Such incentives would not only stimulate growth in these sectors but also promote the creation of high-quality jobs (UNCTAD, 2020).

Enhanced Public-Private Partnerships in Education: Strengthening the link between educational institutions and the private sector is crucial for aligning curriculum with market needs. Partnerships that focus on developing curriculum that incorporates AI and machine learning, data science, and cybersecurity would ensure that students are equipped with relevant

skills. Such initiatives could be supported by international tech firms and local businesses, enhancing resource sharing and expertise (Schwab, 2016).

Comprehensive Workforce Retraining Programs: As AI reshapes job markets, comprehensive retraining programs are essential to help current employees transition to new roles. These programs should be designed with input from industry leaders to ensure they meet actual skill demands. Moreover, leveraging online platforms can make these programs more accessible to a broader audience, ensuring that geographical limitations do not hinder skill development (WEF, 2021).

Policy Framework for Ethical AI Use: It is also imperative to establish a robust legal and ethical framework to govern AI deployment. This framework should address issues such as data privacy, security, and the ethical use of AI, creating guidelines that ensure AI technologies are used responsibly and inclusively (Floridi et al., 2018).

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