Perception Of Job Security In The Era Of Artificial Intelligence Among Journalists In Ebonyi State, Nigeria

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Abstract.

The advent of Artificial Intelligence (AI) has changed the way various jobs are done globally. In journalism, AI has been increasingly adopted in recent time in newsrooms, with tasks such as content generation, data analysis, and social media management being automated. This trend has sparked concerns among journalists all over the world, including Nigeria, particularly Ebonyi State, on the possibility of machines taking over their jobs in no distant time. This study investigated how practicing journalists in Ebonyi State, Nigeria, perceive the security of their job in the face of emerging era of AI. The objectives of the study were to ascertain the level of awareness of AI by practicing journalists in Ebonyi State, investigate the likely effects of AI on their job security, and evaluate their perception of job security in the era of AI. The study adopted the descriptive survey research design. Structured questionnaire was the instrument for data collection. A total of 280 practising journalist in Ebonyi state participated in the study. Data were collected using a structured questionnaire which had a consistency or reliability coefficient of 0.85. Analysis was done using descriptive statistics and summarised using frequency tables. Findings show that majority of the respondents did not feel that their jobs were at risk of being taken over by AI but that AI would complement them in their jobs and increase their productivity. The study concludes that journalists in Ebonyi State appear not to face immediate replacement by AI. The study recommends that Nigerian journalists particularly those in Ebonyi State should not be complacent with the current situation of things. Instead, they should acquire relevant skills that would make them to remain relevant in the era of Artificial Intelligence (AI).

Keywords: *Perception, journalism, job security, job loss and artificial intelligence.*

I. INTRODUCTION

One of the most recent and heartwarming innovations of the 21st century especially in the advanced nations of the world is the introduction of Artificial Intelligence (AI). Artificial Intelligence has to do with a technology that possesses the abilities that were originally attributed to humans (Davenport, 2018). The idea of Artificial Intelligence could be traced to 1956 when John McCarthy coined the term (Okiyi & Nsude, 2020). However, Lewis (2014 in Okiyi & Nsude, 2020) hold that the idea of inanimate objects becoming active and intelligent dates back to the origin of humanity. Consequent upon the emergence of the technology, there are some concerns about the likelihood of machines taking over some jobs. PricewaterhouseCoopers (PwC) as cited in Economic and Social Commission for Asia and the Pacific (ESCAP, n.d.) argues that healthcare, automotive, financial services, retail and consumer, technology, communications and entertainment, manufacturing, energy, and transport and logistics industries will be impacted greatly by AI. The concerns about the likelihood of job loss by some groups of workers are not unfounded as there are verifiable sufficient bases for those concerns. For instance, there have been negative predictions about the impacts of AI on people's jobs. Davenport (2018) presented the predictions vividly

when he said that:Most of the predictions and accounts of the job impacts of AI have focused on the bad news. Millions of jobs can be automated, these accounts suggest. Those at the lower end of the socioeconomic spectrum have the most to fear. Evil bosses will substitute machines for labor without a second thought. (p.129).

While arguing that the concerns raised above could turn out to be true, he recommended that there should be basic minimum income to stem the tide of inequality which could lead to street riots according to him and that even if new jobs were created, they would not be enough to curtail social and economic dislocation. Accordingly, Rudolph et al (2020) in De Angelis, Mazzetti & Guglielmi (2021, p. 9) contend that "the recent pandemic has severely strained various occupational sectors, many companies have experienced downsizing, many more have closed, and unemployment has risen dramatically". Again, Frenette and Morissette (2021) argue that advances in artificial intelligence and robotics have occasioned a great concern for job loss or job transformation among certain categories of workers. But despite the popularity of AI, its application to journalism practice in Nigeria and other countries in Africa is still rare (Okiyi & Nsude, 2020). Eke, Wakunuma, and Akintoye (2023) on the contrary, describe the AI ecosystem in Africa as growing and thriving in the past few years. De Angelis, Mazzetti and Guglielmi (2021) hold that workers who feel that their jobs are threatened would naturally deploy survival strategies to protect their jobs or seek alternative jobs. They argue that there is a negative relationship between job performance and job insecurity and maintain that employees who feel threatened by the possibility of losing their jobs may not perform optimally. Moreover, Frey and Osborne (2013, p. 6), observe that, "workers can thus be expected to resist new technologies, insofar that they make their skills obsolete and irreversibly reduce their expected earnings".

Artificial Intelligence is an important component of the Fourth Industrial Revolution (4IR) which will change the way we live, work and relate with fellow humans (Schwab, 2016 in Eke et al). To this end, studies such as Bhargava et al., (2020), Schwabe and Castellacci (2020) among others have found that the adoption of AI could lead to job loss by some categories of workers among which journalists are one. The literature establishing the likelihood of job loss by some groups of workers namely journalists and others through the adoption of AI reflected more of situations in other climes other than Nigeria, this study therefore, seeks to interrogate the perception of the practising journalists in Ebonyi State of job security in this era of AI bearing in mind that Nigeria set up an Agency for Robotics and Artificial Intelligence in 2018 (Alajemba & James, 2018).

Statement of the Problem

A report by Goldman Sachs economists has revealed that up to 300 million jobs across the globe could be automated in one way or the other by the wave of Artificial Intelligence (Toh, 2023). According to Toh (2023), the report predicted that 18% of jobs throughout the world could be computerized with the effects felt more by advanced economies than emerging economies because white-collar workers are more predisposed to the risk of automation than manual labourers. Accordingly, studies such as Goos, Manning and Salomons (2010), Bhargava et al., (2020), Schwabe and Castellacci (2020), Brynjolfsson and McAfee (2011) and Okocha and Ola-Akuma (2022) have established the likelihood of job loss by different categories of workers as a result of Artificial Intelligence. However, most of the studies only examined situations in the advanced countries of the world such as Norway, New Zealand among others.

Similarly, a report by PricewaterhouseCoopers (2017 as cited in Eke et al.,2023) has shown that even though AI is still at its early stages, the AI market in Europe, North America and China is more advanced than in other regions. As a result, the development and deployment of AI in Africa are still at their early stages and face a myriad of challenges (Eke et al., 2023). Judging from Nigeria's level of development with regards to technology, it becomes necessary to find out whether Nigerian journalists particularly those of Ebonyi State extraction are faced with displacement effect or complementary effect due to AI. It appears that no serious thought has been given to the area of job security in relation to AI in Nigeria particularly Ebonyi State. Against this backdrop, this study aims to interrogate the perception of practising journalists in Ebonyi State with regards to job security vis-à-vis Artificial Intelligence.

Objectives of the Study

The study was guided by the following objectives:

1. To investigate the level of awareness of the impact of AI on the journalism industry among practicing journalists in Ebonyi State, Nigeria
2. To determine the likely effects of AI on job security of practicing journalists in Ebonyi State, Nigeria
3. To evaluate the perception of practicing journalists in Ebonyi State on possible impact of AI on their job security.

Research questions

1. What is the level of awareness of the impact of AI on the journalism industry among practicing journalists in Ebonyi State, Nigeria?
2. What are the likely effects of AI on job security of practicing journalists in Ebonyi State, Nigeria?
3. What are the perceptions of practicing journalists in Ebonyi State on possible impact of AI on their job security?

Scope of the Study

This study focuses on the perception of practising journalists in Ebonyi State on the effects of artificial intelligence on job security. This work was limited to practising journalists in Ebonyi State. Any other state in Nigeria could have served this research purpose but Ebonyi State was selected believing that another research on this subject matter could be conducted elsewhere to either validate the result of this study or the other way round. This study covered the areas of Ebonyi State journalists' awareness and knowledge of artificial intelligence and their perception of its likely effects on job security.

Significance of the Study

This study will have both theoretical and practical significance. Theoretically, it will serve as a useful material to the academia who may be conducting research on Artificial Intelligence. Practically, the findings of this study will be useful to practising journalists, media establishments and media proprietors in policy planning and implementation.

II. CONCEPTUAL REVIEW

Artificial Intelligence

John McCarthy was said to have coined the term "Artificial Intelligence" in I956 (Todd, 1986). Artificial Intelligence according to Davenport (2018) has to do with technologies that deploy those abilities formerly attributed to humans such as knowledge, insight and the perceptive ability to solve specifically identified problems. Similarly, Cardon (2018) argues that "Artificial Intelligence is concerned with the development of computer systems that simulate human reasoning when they are applied to the domain of rational knowledge" (p. ix). According to the scholar, the system can be equipped with the ability for intentional thoughts, needs, and to "inundate a human user in sets of procedures that they can no longer control, that are beyond them. These systems can be equipped with a psyche similar to the human psyche" (p. x). Flowing from the above, Hamdan et al., (2019), conceptualize AI as "the machine simulation of the process of human intelligence" (p. 1).

The scholars observed that there have been attempts at deploying AI to solving complex problems since 1956. According to them, the aspects of AI that researchers make attempts at utilizing in recent times include machine learning, image recognition, speech recognition, natural language generation, sentiment analysis, neural networks and deep learning. Although the scholars cited above defined AI differently, they are actually saying the same thing in different ways. The summary of their definitions is that AI is a technology which is designed to perform some tasks that ordinarily are the exclusive preserve of humans. Artificial Intelligence (AI) can be categorized into weak AI and strong AI (Wisskirchen et al, 2017 in Mhlanga, 2021). According to the scholar, weak AI involves the deployment of computers for the investigation of cognitive processes and the stimulation of human intelligence. On the other hand, strong AI involves where the computers are intellectual and self-learning processes such that via the right software or programming, they can optimize their behaviour in line with their former behaviour and experiences (Wisskirchen et al, 2017 in Mhlanga, 2021).

Job Security

Job security has been variously defined by many scholars. Job security is the sense of certainty of the security of an employee's job from sack or redundancy (Sanyal, Hisam, & BaOmar, 2018). Citing Borland (1999) and Stapleton, (2009), the scholars argued that job security can also be seen as the freedom from the apprehension of losing one's job or the employee's confidence that his/her current job is safe and intact. Job security has been found to have effects on the performance of different employees. It is important for an employee to have job security because it touches on improved motivation, career stability, appears good on the curriculum vitae and considerations (Heibutzki, 2013 in Sanyal, Hisam, & BaOmar, 2018). It affects the performance of the employee such that he/she becomes enthusiastic in the job, and studies have found a positive relationship between employee's job security and performance (Ahmed et al., 2017).

Artificial Intelligence and Job Security: A Nexus

There is a link between AI and job security because the former affects the latter in one way or the other. According to Economic and Social Commission for Asia and the Pacific (ESCAP, n.d.), a number of factors underpin the development of AI which include big data, advanced algorithms and software and increasingly powerful computing capacity. The body cited PricewaterhouseCoopers (PWC) as arguing that AI would impact immensely on healthcare, automotive, financial services, retail and consumer, technology, communications and entertainment, manufacturing, energy, and transport and logistics industries. The above-mentioned sectors of the economy used to be the exclusive preserve of humans but today, the AI technology has some roles to play therein. Therefore, Artificial Intelligence appears to have far-reaching implications for job security worldwide, hence, the fear that it will displace some workers may be genuine. However, the fear may be likened to the fear that people usually express during the emergence of a new medium like newspaper after the emergence of radio and radio after the emergence of television as well as the conventional media after the emergence of social media. Cowen (2011) argued that for one to be employed in the new dispensation governed by technology, one must be skilled in information technology thus:

…unemployment is so concentrated among the relatively unskilled. If you want to get a job in the new and growing sectors of the economy, or the parts of the old economy that are regearing, it really helps to be skilled with information technology.

But still those jobs aren't that plentiful. At the same time that a lot of people are out of work, some of the cutting-edge companies can't find and hire the people they need. We're facing a fundamental skills mismatch, and the U.S. labor market is increasingly divided into a group that can keep up with technical work and a group that can't (Cowen, 2011, *Chap. 3, para. 17*).Wassily Leontief, a Nobel Prize Winner had warned as far back as 1983 that, "the role of humans as the most important factor of production is bound to diminish in the same way that the role of horses in agricultural production was first diminished and then eliminated by the introduction of tractors." (Brynjolfsson & McAfee, 2011; Rifkin 1995, pp. 5-6). Rifkin (1995) observes that many workers are losing their jobs due to technological advancement thus:Now, for the first time, human labor is being systematically eliminated from the production process. Within less than a century, "mass" work in the market sector is likely to be phased out in virtually all of the industrialized nations of the world. A new generation of sophisticated information and communication technologies is being hurried into a wide variety of work situations. Intelligent machines are replacing human beings in countless tasks, forcing millions of blue and white collar workers into unemployment lines, or worse still, breadlines. (p. 3).It was the fear of technological unemployment that made Elizabeth 1 and James 1 of England to deny William Lee a patent for his "stock frame" knitting machine. As narrated by Acemoglu and Robinson (2012, pp. 182-183), William Lee in 1583 returned home after his studies at Cambridge University with the intention of becoming a priest in Calverton, England. Elizabeth 1 (1558-1603) having ruled that her people should be putting on knitted cap and Lee discovering to his chagrin that knitting was a strenuous and time-consuming exercise, decided to make a machine that would make it easier.

Out of enthusiasm, he sought interview with the Queen with a view to demonstrating the importance of the machine and getting a patent to start using it but his request was turned down by the Queen who observed thus: "Thou aimest high, Master Lee. Consider thou what the invention could do to my poor subjects. It would assuredly bring to them ruin by depriving them of employment, thus making them

beggars." (Acemoglu & Robinson 2012, p. 182). According to Acemoglu & Robinson (2012), William Lee went to France for the same purpose but failed and came back to England to seek patent from James 1 (1603-1625) but was denied the patent for the same reason adduced by Elizabeth 1. Acemoglu and Robinson (2012) explain that both Elizabeth 1 and James 1 were apprehensive that mechanization would destabilize England, throw people out of job, cause unemployment, and serve as a threat to the royal power. According to them, "the stocking frame was an innovation that promised huge productivity increases, but it also promised creative destruction" (p. 183). The scenario painted above finds expression in Machiavelli's (1999, p. 21) observation that "there is nothing more difficult to handle, more doubtful of success and more dangerous to carry through than initiating changes…".

III. EMPIRICAL REVIEW

Bhargava, Bester & Bolton (2020) conducted a study entitled, "Employees' Perceptions of the Implementation of Robotics, Artificial Intelligence, and Automation (RAIA) on Job Satisfaction, Job Security, and Employability". The study which was qualitative examined working adults' perceptions of the implementation of robotics, artificial intelligence (AI), and automation (RAIA) on their job security, job satisfaction, and employability. By means of cross-sectional and exploratory design, the researchers conducted 21 semi-structured interviews with samples drawn from consulting, accounting and finance, and hospitality industries. The study found among other things that "human touch" and "soft skills" cannot be replaced by RAIA and that employees should consider robotics, artificial intelligence and automation as an opportunity rather than a threat. This study is related to this current study because it studied job security in relation to Robotics, Artificial Intelligence and Automation. However, it differs from the current study because while it adopted a qualitative approach, the current study adopted a quantitative approach to research. It also differs from the current study because it studied consulting, accounting and finance as well as hospitality industries as against the current study which focuses on journalism only. In another study entitled, "Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA): Employees' Perceptions of our future Workplace", Brougham & Haar (2017), evaluated among other things to test Smart Technology, Artificial Intelligence, Robotics and Algorithms (STARA) awareness in order to ascertain whether employees see it as a threat to their jobs or careers and to also determine the effect STARA has on employees' jobs in New Zealand.

Adopting a combination of quantitative and qualitative approaches, the study found that there was little belief among employees in New Zealand that robots and automation would take over their jobs. The above study is related to the current study because it studied partly what the current study focuses on which is employees' awareness of Artificial Intelligence. However, the previous study differs from the present study because it adopted both qualitative and approaches while the study adopted only quantitative approach. It also differs from the present study as it covered Smart Technology, Artificial Intelligence, Robotics and Algorithms whereas the current study focuses on Artificial Intelligence. The findings of the above study was corroborated by Autor, Levy and Murnane (2003 as cited in Goos et al., 2010) which found that technology could replace workers engaged in routine jobs i.e. jobs that are procedural or those which involve step by step approach but cannot yet replace workers doing non-routine jobs (Goos et al., 2010). It is for that reason above that the authors observed that the single factor responsible for the shifts in employment in Europe is the 'routinization' hypothesis. Besides, the above findings disagree with John Maynard Keynes who in the 1930s had propounded the theory of technological unemployment where he postulated that technological change causes loss of jobs (Keynes, 1937). Again, AI is believed to increase productivity by helping firms and people to utilize their resources more efficiently and streamlining how interactions with large sets of data would take place (ESCAP, n.d.).

In a study entitled "Automation, Workers' Skills and Job Satisfaction", Schwabe and Castellacci (2020) investigated the extent to which automation affected job satisfaction of Norwegian workers and whether it affected low-skilled workers and high-skilled workers differently. Utilizing data from *Working Life Barometer survey* for the period of 2016–2019 and the information on the introduction of industrial robots in Norway from the International Federation of Robotics, the researchers found that 40 percent of

workers are apprehensive of losing their jobs to machines in future. According to them, the fear of losing their jobs affected those workers' job satisfaction. They also found that low-skilled workers who performed routine tasks were more predisposed to the fear of job loss due to automation. The study under review is related to the current study because both centred on automation and Artificial Intelligence both differ from each other because while the previous study investigated how automation and workers' skills affected their job satisfaction while the present study examines how automation affects journalists' job security.Similarly, in a study entitled "Determinants of Automation Risk in the EU Labour Market: A Skills-Needs Approach", Pouliakas (2018) tried to ascertain the determinants of "automatability risks" such as the propensity of European Union (EU) workers engaging in jobs with high risks of being taken over by machines, robots or other algorithmic processes.

Adopting data on tasks and skill needs in jobs gathered by the European Skills and Jobs Survey (ESJS), the scholar found that about 14 percent of EU adult workers faced high risk of automation. According to the study, the risk of displacement is more among male and low-skilled workers and predominant among private sectors that fail to avail their workers of what it called "remedial training". The previous study is related to the current study because it interrogated the risk of automation by workers but differs from the current study because while the current study focuses on job security of journalists, the previous study focused on workers that had the risk of automation.Frey and Osborne (2013) conducted a study entitled, "The Future of Employment: How susceptible are jobs to Computerisation?" The study examined the susceptibility of 702 occupations to computerisation using Gaussian process classifier and found that 47% of US total employment was at risk. The study also found that "wages and educational attainment exhibit a strong negative relationship with an occupation's probability of computerisation" (Frey & Osborne 2013, p. 1). The findings of the study reinforced the displacement view of automation vis-à-vis job security. The success of the study motivated other researchers to replicate it in other countries wherein they found the percentages of workers at the risk of technological unemployment as follows: UK (35%), Canada (42%), Germany (42%), Switzerland (48%), Uzbekistan (55%), Brazil (60%), and Ethiopia (85%) (Lima et al, 2021).

The study under review is related to the current study because both interrogated job security but differs from the current study because while the latter focuses on one profession, the former focused on 702 occupations. In another related study entitled, "Journalistic Metamorphosis: Robot Journalism Adoption in Nigeria in a Digital Age", Okocha and Ola-Akuma (2022) interrogated Nigerian journalists' perception on how robot journalism can or has transformed journalism. Relying on mediamorphosis theory, the researchers adopted survey method in carrying out the study. With a sample size of 389 drawn from the various geo-political zones of Nigeria, the study found that 52.2% of the respondents believed that the "adoption of robot journalism will result in the loss of jobs for human journalists" (p. 284). This indicates a preponderance of journalists who believe in the displacement view of automation with regards to job security over those who hold the complementary view. No wonder the study "established that automation is the way of the future" (p. 255). The previous study is related to the present study because both studied job security of journalists in relation to robotics and artificial intelligence. However, while the former was anchored on mediamorphosis theory, the latter was anchored on diffusion of innovations theory. Again, both studies did not study exactly the same thing as the previous study covered just an aspect of what this study covers.However, Dahlin (2019) conducted a study entitled "Are Robots Stealing Our Jobs?" wherein he sought to interrogate whether robots were displacing workers in the metropolitan parts of the United States. The study adopted regression models and found a positive relationship between robots and humans engaged in the occupations he investigated.

According to the study, robots were not stealing people's jobs in the jobs investigated. This study corroborated the complementary view which holds that automation complements humans in their jobs rather than displace them. The findings of the study were in consonance with (IFR, 2017 as cited in Nsude, 2020) which held that rather than substitute for labour, automation complements it and increases output; stressing that commentators dwell so much on "machine substitution for human labour and ignore the strong complementariness between automation and labour that increase productivity, raise earnings and augment

demand for labour" (p. 3). Both the present and previous studies are related because both of them studied job security and artificial intelligence but differ because even though both studies focused on job security, robotics and artificial intelligence, the present study was carried out in Nigeria while the previous study was conducted in the United States. Even the only one empirical study which focused on robotic journalism investigated just an aspect of what this study examines. By implication therefore, it appears that no serious thought has been given to artificial intelligence and job security in Nigeria. The above is a gap in knowledge which this study intends to fill.

IV. THEORETICAL FRAMEWORK

This study was anchored on Diffusion of Innovation Theory to serve as a framework upon which it rests**.** The theory was propounded by Everett M. Rogers in 1962. The theory explains the processes and stages involved in adopting an innovation as well as the factors that enhance its adoption. According to Rogers (1983), although different innovations have different rates of adoption, an innovation's possession of certain characteristics like relative advantage, compatibility, trialibilty, observability and complexity makes for its faster rate of adoption. Rogers (1983, p. 5) is of the view that, "diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system".

Rogers (1983) identifies five steps involved in adopting an innovation namely knowledge, persuasion, decision, implementation, and confirmation. This means that a social system (individuals, groups or organizations etc.) gets to know about the existence of an innovation, forms either a favourable or unfavourable attitude towards it, decides to adopt or reject it, makes use of it and then seeks reinforcement of the innovation decision which may lead to the reversal of earlier decision. Innovation decision can result in adoption, rejection or discontinuance of an innovation.

The scholar also categorized adopters into: innovators, early adopters, early majority, late majority and the laggards on the basis of their innovativeness i.e. "the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than other members of a social system (Rogers 1983, p. 36). Baran and Davis (2010) explain that most people become aware of an innovation through the mass media. They argue that innovation is adopted by a small group of innovators also called early adopters after which the opinion leaders learn of the innovation from the early adopters and apply it and encourage their friends to use it also if they find it useful. The strengths of the theory consists in its integration of an enormous amount of empirical studies and its provision of guide for information campaign in the United States and other countries. However, the theory is criticized for being source-dominated, underestimating the power of the media among other things (Baran & Davis, 2010). The weaknesses of the theory notwithstanding, the theory is still relevant to this study because it provides a framework in understanding how a new innovation like Artificial Intelligence can be adopted in Nigeria.

V. METHODS

This study adopted descriptive survey research design. This research design was considered suitable for this study because it allow for measurement of characteristics, opinions or behaviours of a population by studying a small sample and making generalisations on the population (Baran, 1999 in Nwodu (2006). Again, Wimmer & Dominick (2005) argue that with descriptive survey research design, a large amount of data can be collected with relative ease from a variety of persons who according to them include but not limited to demographic and lifestyle information, attitudes, intentions. Sobowale (1983) concurs that descriptive survey technique is the most commonly used by behavioural scientists. The data used in this study were collected between October 30th and November 5th, 2023 in Abakaliki, the Ebonyi State capital, during the annual Press Week of the Nigerian Union of Journalists, Ebonyi State, Nigeria Chapter.The population of this study consisted of all practising journalists in Ebonyi State who were registered with the State's Council of the Nigerian Union of Journalists (NUJ). The number was 304 at the time of this study according to the register of Nigerian Union of Journalists (NUJ), Ebonyi State Chapter.Because this figure was manageable, the study adopted the census sampling technique which allows a researcher to study all elements of the population.

Structured questionnaire of 17-items served as instrument for data collection. The choice of structured questionnaire was because it ensures that all participants are asked the same set of questions in the same order, allowing for standardised data collection. This consistency increases the reliability and validity of the study results. A structured questionnaire also helps minimise interviewer bias, as the questions are pre-determined and presented uniformly to all participants. The questionnaire was structured to capture both demographic and psychographic data. Three experts, one journalist, one data analyst and a journalism professor/instructor at the Department of Mass Communication of Ebonyi State University, Abakaliki, validated the instrument. The reliability of the instrument was determined using a pilot study conducted using repeated measures of two-week intervals with 20 journalist participants in Enugu metropolis of Enugu state who were not part of the main study. Journalists in Enugu metropolis share similar characteristics with their counterparts in Abakaliki, Ebonyi State. Generated data were analysed using the Pearson r correlation coefficient and the result showed that the instrument had a consistency coefficient of 0.85, which means that the instrument was reliable for the main study.The instrument for the main study were administered to the journalists during the NUJ, Ebonyi State Chapter's press week held at Dr. Sam Egwu's Press Centre, Abakaliki, Ebonyi State, between October 30th and November 5th, 2023. Data generated were then coded and analysed using descriptive statistics and presented using frequency tables.

VI. RESULT AND DICUSSION

Out of the 304 copies of the questionnaire drafted, only 286 members of the NUJ attended the Press Week and participated in the study. Again, out of the 286 participants, 283 returned the instrument, and out of the 283 returned, 280 were found correctly filled and useable.

Table 1. Demographic Data

Respondents` Age (years)	Frequency	Percentage (%)
Age of Respondents		
18-25	28	10
26-32	84	30
33-39	84	30
40-46	42	15
47-53	21	7.5
54 & above	21	7.5
Total	**280**	**100**
Gender of Respondents		
Male	168	60
Female	112	40
Total	**280**	**100**
Educational Qualification of Respondents		
WASSC/SSC	0	0
OND/NCE	28	10
B.Sc./B.A./B.Ed	154	55
M.A./MSc./Ph.D	98	35
Total	**280**	**100**

Source: Field Survey, 2023

The demographic data in table 1 above indicate preponderance of young people over the elderly ones among the respondents as 70% of the respondents were between the ages of 18 and 39 years, while 30% of them were between the ages of 40 and above. There was also male dominance over female respondents. This is because the data show that male respondents represented 60% while female respondents represent 40%. Again, 90% of the respondents had either Bachelor or Master's degrees or Doctor of Philosophy (Ph.D) as

their highest qualifications while only 10% had either National Diploma. The data show that majority of the respondents were highly educated which is good for a sound journalism practice.

Table 2. Media affiliation of Respondents

Media Affiliation	Frequency	Percentage (%)
Federal	70	25
State	84	30
Private	126	45
Total	280	100

Source: Field Survey, 2023

The data in Table 2 indicate a preponderance of journalists working with the government over those working with private individuals. This implies that the journalistic principle of holding government accountable to the people may be hindered. This is because the data show that the journalists working with government-owned media houses constituted 55% of the respondents while those working with privately-owned media represented 45% of the respondents.

Table 3. Responses on awareness of artificial intelligence

Variable	Frequency	Percentage (%)
Yes	210	75
No	28	10
Can't say	42	15
Total	280	100

Source: Field Survey, 2023

The data in Table 3 above indicate majority of the respondents were aware of AI. This shows a high level of awareness of AI technology among the respondents. The data therefore show that 75% of the respondents were aware of AI as against 10% of them who were not aware of the technology.

Table 4. Respondents' level of awareness of artificial intelligence

Variable	Frequency	Percentage (%)
High	196	70
Low	56	20
Medium	14	5
Can't say	14	5
Total	280	100

Source: Field Survey, 2023

The data in Table 4 above show that there is high level of awareness of Artificial Intelligence among the respondents. This is because the majority (70%) of the respondents showed high level of awareness of AI as against 20% had low level of awareness and 5% that had minimal level of awareness.

Table 5. Respondents' knowledge of artificial intelligence

Variable	Frequency	Percentage (%)
Yes	168	60
No	84	30
Can't say	28	10
Total	280	100

Source: Field Survey, 2023

The data above indicate majority of the respondents (60%) had knowledge of AI while 30% of them had no knowledge of the technology. This indicates a high level of knowledge about AI among the respondents. It also indicates the preponderance of those with knowledge of AI over those without AI knowledge.

Table 6. Responses on meaning of artificial intelligence

Variable	Frequency	Percentage (%)
Strongly agree	28	10
Agree	140	50
Strongly disagree	42	15
Disagree	42	15
Undecided	28	10
Total	280	100

Source: Field Survey, 2023

Table 6 above shows that majority of the respondents were in agreement with the definition of artificial intelligence as a technology that possesses the abilities that are originally possessed by humans while those who were in disagreement with the definition were in minority. The data show that 60% of the respondents knew the meaning of AI while 30% did not know its meaning and 10% were undecided.

Table 7. Responses on whether AI can take up their job

Variable	Frequency	Percentage (%)
Strongly agree	28	10
Agree	28	10
Strongly disagree	112	40
Disagree	84	30
Undecided	28	10
Total	280	100

Source: Field Survey, 2023

The data in Table 7 above show that majority (70%) of the respondents did not agree that AI can take up their jobs whereas only 20% of the respondents agreed that their jobs could be taken over by AI. The data indicate a preponderance of those who agreed that AI could take over their jobs over those over those who agreed. This finding suggests that majority of the journalists seem not to be in tune with the reality of the wave of the AI sweeping across various sectors and professions globally.

Table 8. Responses on whether AI can complement them in their jobs

Variable	Frequency	Percentage (%)
Strongly agree	84	30
Agree	112	40
Strongly disagree	28	10
Disagree	28	10
Undecided	28	10
Total	280	100

Source: Field Survey, 2023

The data in Table 8 indicate a preponderance of those who believe that AI can complement the respondents in doing their jobs over those who do not. This is because the data show that majority (70%) of the respondents believed that AI could complement them in their jobs whereas only 20% of the respondents believed that AI could not complement them in their jobs.

Table 9. Responses on whether AI can increase journalists' productivity

Variable	Frequency	Percentage (%)
Strongly agree	112	40
Agree	84	30
Strongly disagree	42	15
Disagree	28	10
Undecided	14	5
Total	280	100

Source: Field Survey, 2023

The data above show that majority (70%) of the respondents were of the view that AI could improve their productivity while only 25% had a contrary view. Table 11 above shows a preponderance of those who believe in the productivity effect of AI over those who do not.

Table 10. Responses on whether AI can do jobs better than humans

Variable	Frequency	Percentage (%)
Yes	42	15
No	196	70
Can't say	42	15
Total	280	100

Source: Field Survey, 2023

The data in the Table 10 above indicate that majority (70%) did not believe in the ability of AI to perform better humans whereas 15% believed that AI could perform better than humans. The data suggest a predominance of respondents who have confidence in the ability of humans to perform better than AI over those with a contrary view.

Table 11. Responses on whether AI can reduce the number of human workers

Variable	Frequency	Percentage (%)
Yes	126	45
No	126	45
Can't say	28	10
Total	280	100

Source: Field Survey, 2023

Table 11 above shows that there is parity between those who believe that AI could reduce the number of human workers and those who have a contrary view respectively. The data indicate that the respondents somehow understand the urgency of the moment since 45% of them agreed and disagreed respectively on the question of the ability of AI to minimize the number of human workers.

Table 12. Responses on whether AI can reduce the cost of human labour

Variable	Frequency	Percentage (%)
Yes	154	55
No	98	35
Can't say	28	10
Total	280	100

Source: Field Survey, 2023

The data in Table 12 show that majority (55%) of the respondents agreed that AI could reduce the cost of human labour while 35% of the respondents disagreed with the idea that AI could reduce the cost of human labour. The data are an indication that journalists need to equip themselves with more skills to avoid being replaced because if AI could reduce the cost of human labour, media owners may decide to replace human journalists with AI-driven journalists to reduce their running cost.

Table 13. Responses on whether respondents' jobs are at risk due to AI

Variable	Frequency	Percentage (%)
Yes	56	20
No	210	75
Can't say	14	5
Total	280	100

Source: Field Survey, 2023

The data in Table 13 are an indication that majority (75%) were not afraid of losing their jobs as a result of the existence of AI while 20% had an opposite view. The data show that the respondents have too much confidence in the current state of affairs but neglect the reality of the wave of AI all over the world.

Table 14. Responses on whether respondents are worried of their job security due to AI

Variable	Frequency	Percentage (%)
Yes	42	15
No	224	80
Can't say	14	5
Total	280	100

Source: Field Survey, 2023

The data in Table 14 that indicate that majority (80%) of the respondents were not concerned about the possibility of losing their jobs due to AI as against a minority of 15% who felt their jobs were at risk due to AI. The data are an indication that most of the journalists were not in tune with reality as it concerns AI and journalism practice. The data may result from possible lack of adoption of the technology by the employers but they may decide to adopt it in future thereby threatening journalists' job security.

Table 15. Responses on whether AI is cheaper than human labour

Variable	Frequency	Percentage (%)
Strongly agree	28	10
Agree	56	20
Strongly disagree	28	10
Disagree	140	50
Undecided	28	10
Total	280	100

Source: Field Survey, 2023

Table 15 indicates that majority (70%) of the respondents disagreed with the idea of AI being cheaper than human labour whereas only 30% agreed that AI is cheaper than human labour. The data suggest limited knowledge of the subject-matter because unlike humans, AI does not get tired neither does it receive salaries or demand for salary increment. This makes AI cheaper than human labour.

Discussion

Beginning with the demographic data, there was dominance of young people of 18- 39 among the journalists who participated in this study. They constituted 70% of the respondents. Male participants also outnumbers their female counterpart. The male constituted 60% while the females were 40%. Participants also showed high level of education as 90% of them had either Bachelor or Master's degrees or Doctor of Philosophy (Ph.D) as their highest qualifications while only 10% had either National Diploma. The implication of above is that the persons used for this study were qualified and suitable for the study. The psychographic data on the other hand showed high level of awareness of artificial intelligence among participants. This finding is however disagrees with that of Brougham and Haar (2017) which rather indicates that Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA) awareness was low among respondents in typical African societies. The differences in findings of that study and the present study may be due to the seven-year gap between when that study and the present study. The finding of the current study therefore extends knowledge in this perspective as it provides a more recent data for planning and policy implementation.Further findings show that although respondents believe that AI could complement human labour, increase and increase productivity but cannot do jobs better than humans.

This finding is again, further corroborated by Bhargava, Bester & Bolton (2020) which holds that "human touch" and decision-making capacity are unique to humans and cannot be replaced by machines or robots. It is also in agreement with Dahlin (2019) which found that robots were not stealing people's jobs but complementing them in doing the jobs. However, it is contradicted by Graefe and Bohlken (2020) who found no difference in reader's perception of credibility between automated news and human-written news as well as a small percentage of human-written news in terms of quality. This implies that there still exists the fears that AI could perform the same function as human journalists thereby putting the human journalists at risk of being replaced by the technology. Regardless of the above, respondents were confident that the threats of AI to human jobs could be allayed in the hope that AI requires human efforts to make them work. This finding resonates that of Bhargava, Bester & Bolton (2020) which found that "human touch" and "soft skills" cannot

be replaced by Robotics, Artificial Intelligence and Automation (RAIA) and that employees should consider robotics, artificial intelligence and automation as an opportunity rather than a threat. It also aligns with that of Brougham and Haar (2017) which found that perception of technology replacing employees' jobs was low.

The current study further negates that of Okocha and Ola-Akuma (2022) which found that majority of the journalists investigated said robot journalism could lead to their loss of jobs. The findings of the current study further shows the limited knowledge of respondents on how Artificial Intelligence can adversely affect journalism practice and resonates the need for continuous training and retraining of journalists on how AI could assist them in doing their job. Despite the fresh insights offered by this study, it has some limitations. First, the study used a self-reporting instrument. Self-reporting instruments are generally prone to introducing social desirability, particularly as there was no way of validating what the participants reported. Also, the sampling selection might introduce bias because the study did not adopt random selection; it studied all .This makes the result unsuitable for generalisation to other populations.Another limitationwas the use of the cross-sectional design. Data collected from cross-sectional studies represent only a small fraction of the target population at a fixed time. The only advantage is that it is cost-effective, and data can be collected in a short amount of time. There is a need for further studies to address the identified limitations.

Summary of major findings

The major findings of this study are as follows:

- There is a high level of awareness and knowledge of artificial intelligence among the respondents.
- Artificial Intelligence will have complementary effect on the jobs of the respondents by increasing their productivity.
- Journalism in Ebonyi State does not face immediate replacement by Artificial Intelligence.

VII. CONCLUSION

Based on the findings, this study concludes that journalism in Nigeria particularly Ebonyi State is not faced with immediate threat of replacement by Artificial Intelligence. This is without prejudice to the fact that Nigeria established an Agency for Robotics and Artificial Intelligence in 2018. However, this does not mean that Nigerian journalists should be complacent with the current state of affairs as technology is making waves the world over in different sectors. Also, the agency may as well be working towards automating some jobs in order to cut the cost of human labour just as the private sector may also be thinking about reducing their cost of labour in order to make more profit and achieve higher productivity. The study recommends:

1. That journalists should go beyond awareness of Artificial Intelligence to being highly knowledgeable about the technology. They should be able to understand that AI has its biases originating from its datasets or data source and therefore, should differentiate between accurate and inaccurate information in order to pass across accurate information to their target audience.
2. That journalists should prepare themselves for any eventuality of job loss should government and private sectors decide to automate their jobs and theirs becomes one of them. They can train to become fact-checkers by becoming acquainted with AI-based tools like Google Reverse Image search, RevEye Reverse Image search, Awesome Screenshot etc. for image verification and Invid, YouTube Data Viewer, Watch frame by Frame among others for video verification.
3. That journalists should equip themselves with relevant skills like learning how to design webs, programme and edit videos which will make them irreplaceable in the event of full-scale automation by their employers. Journalists can become automation editors whose job will be to maintain, supervise, detect errors and correct them. Leaving the journalistic jobs for AI may be counter-productive because the biases and prejudices of its producer(s) will be injected into its work.

Suggestion for further study

This study only covered one State out of the 36 states in Nigeria and is limited to journalism out of many other professions whose practitioners will also be affected by the wave of Artificial Intelligence. It is

limited in scope. Therefore, it is necessary to conduct replicative studies in other states in order to update the scope because of the under-exploration of the subject-matter especially in this part of the world. The researchers also suggest that another study be conducted to evaluate the future of jobs in the communication industry with particular emphasis on journalism from the perspective of experts on artificial intelligence.

Ethical clearance

Ethical consent was sought and obtained from the participants used in this study. They were made to understand that the exercise was purely for academic purposes, and their participation was voluntary.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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