



IMPACT OF ADOPTION OF INDUSTRY 4.0 ON JOBS CREATION OF INSURANCE COMPANIES IN NIGERIA

***AGBOOLA OMONIYI OLADIPUPO, PhD; & **AGBOOLA ADEOLA OLANIKE**

*Department of Actuarial Science & Insurance, Joseph Ayo Babalola University, Osun State. **Department of Management & Accounting, Lead City University, Ibadan.

insureinternational@gmail.com

Abstract:

This quantitative study dives into the link between the adoption of Industry 4.0 and job creation within Nigeria's insurance sector, adopting a complex research approach spanning cross-sectional and survey research methodologies. The research casts a wide net, pulling from a sizable population of 504 management individuals gathered from 56 insurance companies operating in Nigeria. To verify the representativeness of the sample, the study meticulously utilises Taro Yamane's technique for limited populations, resulting in a precisely selected sample size of 228. In a proactive attempt to eliminate potential biases and reinforce the trustworthiness of the findings, the sample size is further enlarged by 20%, thereby resolving problems such as non-response and data adequacy. Through a comprehensive evaluation of 208 precisely answered questionnaires, the study exposes strong data underlining the large and favourable influence of Industry 4.0 adoption on job creation within the Nigerian insurance environment. These findings throw a spotlight on the transformational potential of technology breakthroughs, demonstrating their important role in not just providing job possibilities but also in encouraging sustainable long-term growth within the industry. By putting light on the symbiotic link between technology adoption and employment generation, the study provides vital insights to the conversation around the digitization of the insurance business in Nigeria. Moreover, the study's extensive research design and rigorous methods provide weight to its findings, increasing trust in the validity and generalizability of the conclusions. Overall, this study serves as a clarion call for stakeholders within the Nigerian insurance sector to embrace Industry 4.0 technologies as catalysts for driving positive socio-economic change, fostering innovation, and nurturing a vibrant ecosystem conducive to job creation and sustainable development.

Keywords: Adoption of industry 4.0, Job creation, Technology acceptance model

Introduction

Insurance is a key component of today's financial services industry. In addition to its traditional role of risk management, insurance market activity, both as intermediary and as provider of risk transfer and indemnification, may promote growth by allowing

different risks to be managed more efficiently, promoting long-term savings and encouraging the accumulation of capital, serving as a conduit pipe to channel funds from policy holders to investment opportunities, thereby mobilising domestic savings into productive investment (Aigbovo-Omo, 2020). Insurance is critical to driving economic growth (Fadun, 2023). The insurance industry considerably reduces unexpected occurrences and indemnifies insureds who suffer losses as a result of insured dangers under the terms and conditions of the insurance policy.

The fourth industrial revolution (4IR), also known as Industry 4.0, has lately received a lot of interest in the production research community (Lu, 2017; Xu, Xu, & Li, 2018). The company's deployment of the industry 4.0 idea is intended to respond to changes in its environment, such as globalisation, increased competition, and market instability. Industry 4.0 aims to improve a company's competitiveness by assuring production flexibility and the capacity to adapt to changing client expectations and individual requirements (Kiel, Müller, Arnold & Voigt, 2017; Müller, 2019). Nonetheless, experts are still divided on the outcome of implementing this notion (Zemanova & Drulakova, 2016). Researchers have highlighted the driving causes of Industry 4.0 as increased rivalry and a desire to enhance sustainability, creativity, efficiency, and firm performance (Horváth & Szabó, 2019).

The Fourth Industrial Revolution and technological innovation are having a major influence on businesses across all industries, with machines taking centre stage. Employers may do more with less by implementing cutting-edge platforms and technologies such as artificial intelligence (AI), robots, the Internet of Things (IoT), 3D printing, genetic engineering, quantum computing, and others, all of which have an influence on labour markets and the workforce (Buyana, 2022). Industry 4.0 is notably useful in highly developed nations in terms of competitive advantage, but it also increases unemployment due to high levels of automation (Nafchi & Mohelská, 2018).

Unlike the technologies of the first and second Industrial Revolutions, the third and fourth Industrial Revolutions represent skill-biased technological progress (Rodrik, 2018; Acemoglu and Restrepo, 2019). Routine non-consumer facing activities are being removed over the world by digital and 4IR technology, which has a clear advantage over people in many tasks, particularly those that are routine, physically demanding, and/or hazardous (Fox & Signé, 2021). There is also a growing interest in technology accelerators with an insurance focus. Insuretechs are leveraging blockchain, robotic process automation (RPA), artificial intelligence (AI), machine learning, augmented reality (AR), and other emerging technologies to implement new, interconnected strategies enabled by the Internet of Things (IoT) and linked devices (Buyana, 2022).

The Fourth Industrial Revolution presents dynamic advancements that will have an influence on organisations, individuals, and their working environments, producing disruption in society, the economy, and industry (Mayer, Wegerle, & Oosthuizen, 2021). Humans used to undertake tasks that are now being replaced by high-efficiency automations (Schwab, 2017). The Fourth Industrial Revolution creates both opportunity

and major hazards. New technologies have the ability to create new employment and replace current ones (Eiser, Mayet, & Johnson, 2020). Furthermore, the 4IR's growing use of technology has raised fears about major job losses. According to the World Economic Forum (2016), many of the major transformational drivers currently affecting global industries will have a significant impact on employment, ranging from significant job creation to job displacement, as well as increased labour productivity and skills. These concerns are heightened in emerging nations such as Nigeria, where governments are already working to eliminate excessive unemployment. The goal of this research is to investigate the influence of Industry 4.0 adoption on job creation in Nigerian insurance businesses.

Research Hypothesis

H0: Adoption of Industry 4.0 has no significant effect on job creation among insurance companies in Nigeria.

Concept of Job Creation

Job creation is the income-generating opportunity provided to others, deliberately or subconsciously, in the pursuit of one's own economic interests (Adenutsi, 2023). Job creation is the process by which individuals devote their money and time to create and build something unique and creative, while also accepting multiple risks such as financial, physical, psychological, and social dangers (Ejo-Orusa and Mpi, 2019). Job creation is generally motivated by various motivations, most notably the desire to obtain/attain something, explore, achieve, or possibly escape the authority of others (Beverly, 2021). Job creation is the dynamic process of producing incremental wealth. Individuals that give value for the product/service and assume tremendous economic risks in terms of time, cash, equity, and career dedication make the riches feasible. (Sharma. 2021).

Concept of Industry 4.0

Industry 4.0 refers to the fusion of physical assets and cutting-edge digital technologies, including the internet of things (IoT), artificial intelligence (AI), robots, drones, autonomous vehicles, 3D printing, cloud computing, nanotechnology, and more, that communicate, analyse, and act on information, enabling businesses, consumers, and society to be more flexible and responsive, as well as to make more intelligent, data-driven (Deloitte, 2020).

Industry 4.0 is the contemporary era in which nations throughout the world are adopting game-changing technologies like as artificial intelligence (AI), robots, cloud computing, and the Internet of Things (IoT). Most critically, none of these technologies are seen in isolation inside the 4th IR ecosystem. Instead, it refers to a fusion in which these powerful technological instruments interact with our physical and biological surroundings (Dwolatzky & Harris, 2021).

Four disruptions are driving Industry 4.0: the astonishing increase in data volumes, computational power, and connectivity, particularly new low-power wide-area networks; the emergence of analytics and business intelligence capabilities; new forms of human-machine interaction, such as touch interfaces and augmented reality systems; and advances in transferring digital instructions to the physical world, such as advanced robotics and 3-D printing (Fox & Signé, 2021).

Empirical Review

Grenčíková, Kordoš and Berkovič (2020) estimate the impact of Industry 4.0 concept implementation on job creation in small and medium-sized enterprises and family businesses in Slovak Republic. A questionnaire survey in small and medium-sized enterprises in Slovak Republic was chosen as the fundamental research method. The results have shown that new technologies will increasingly displace physical labor in particular, and emerging jobs will put ever-increasing demands on human intellect.

Rapanyane and Sethole (2020) seeks to analyse the implications of the so-called 4th Industrial Revolution (4IR) on job creation. They agreed that jobs at risk in the 4IR will be the ones which are on some level routine, repetitive and predictable. Sectors like manufacturing, logistics and retail and wholesale and some of the lower-skilled occupations within are the most vulnerable to being replaced by some technology or machinery or robots. All business owners are running after the maximisation of profit which is the primary goal that aim to reduce the company costs, alternatively, an important factor to think about. Despite how low the people's wages are at the company, they will never compete with machines and robots which demand no break, no salary and no illness and this makes them to even be more competitive and cost-effective

Sumer (2018) assert that the rapid increase in digitalization, robotization, and intelligent automation has great impact on markets, including the labour market. Technological changes destroy some jobs while generating new jobs and occupations. Replacement of jobs by robots, smart vehicles, digitalized and connected processes will have great impact on labour market resulting in mass unemployment. However, it has been put forward that there will be considerable losses in some occupational categories with routine tasks, both in manual and cognitive jobs. In some other jobs, new technologies have a complementing effect which might lead to employment generation.

Technology Acceptance Model

The theoretical foundation for this study is Fred Davis' Technology Acceptance Model (TAM), which was initially developed in the late 1980s. Davis established the paradigm in his seminal paper "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," which appeared in the journal MIS Quarterly in 1989. Davis developed the foundation for TAM, which has since been expanded and improved by several scholars in the field of information systems, insurance and technology acceptance, including Viswanath Venkatesh and Susan L Davis. TAM offers critical

insights into how people perceive and adopt new technologies (Abuhassna et al., 2023). In terms of the influence of Industry 4.0 adoption on job creation in Nigerian insurance businesses, TAM provides a systematic approach to evaluating the factors influencing the acceptance and use of Industry 4.0 technology by management staff inside these organisations. TAM identifies two key factors that impact people's willingness to accept technology: perceived ease of use and perceived utility (Nurqamarani and Soegiarto, 2021). Perceived ease of use is the degree to which individuals believe that using technology will be straightforward and comfortable, whereas perceived utility is the belief that the technology would increase their job performance and productivity (Gaddi, Prashantha, & Shivashankar, 2021). In this study, management staff's perceptions of the ease of incorporating Industry 4.0 technologies into their work processes, as well as the perceived benefits of these technologies in terms of job creation, will be important predictors of adoption behaviour. Using TAM as a theoretical framework, this study aims to comprehensively examine how market 4.0 adoption effects job creation in the Nigerian insurance market, providing valuable insights for both academics and practitioners.

Methodology

This study takes a quantitative research method, including both cross-sectional and survey research techniques. Cross-sectional research collects data from a sample of participants at a specific moment in time to analyse population patterns, whereas survey research collects data using standardised questionnaires or interviews (Ojeleye & Bakare, 2020). According to statistics from the National Insurance Commission (NAICOM) website, there were fifty-six listed insurance businesses in Nigeria as of January 31, 2024. The research focuses on managerial positions within these companies, such as Managing Directors, Executive Directors Technical, Heads of Technical Underwriting and Reinsurance, Chief Financial Officers, Heads of Audit, Heads of Enterprise Risk Management (ERM), Chief Risk Officers (CROs) specialising in Risk and Compliance, and Heads of Human Resources/Administration. While the major unit of analysis is the management level, the study acknowledges the possibility of future research into employee subunits. Recognising the importance of middle and senior management in everyday operations, the research seeks views from this group. Taro Yamane's method for finite populations was used to get a sample size of 228 from a population of 504 (56 insurance firms x 9 management personnel). Following Israel's (2013) proposal, the sample size was raised by 20% to account for issues such as non-response, appropriate filling, and missing values, yielding a final sample of 208 (78% adequately filled questionnaires) for analysis.

Instruments

The questionnaire items were validated and adapted from past study. The assessment of Industry 4.0 adoption readiness was based on a Nimawat and Gidwani (2016) scale. An

example statement from this scale is "There are machines and technologies available as per Industry 4.0," which is rated on a five-point Likert scale ranging from "strongly disagree" to "strongly agree." The stated Cronbach's alpha coefficient of 0.812 indicates that the instrument is reliable and appropriate for the investigation. Similarly, to assess job creation, the researchers used a 5-item self-developed questionnaire that was face-validated by three experts from Ahmadu Bello University's Department of Insurance and Actuarial Science in Zaria. An example of a five-point Likert scale item is "Our company has created a significant number of new job positions in the past one year". The Cronbach's alpha coefficient of 0.834 shows that this instrument is reliable and adequate for the investigation.

Results

Summary of regression analysis for the effect of Adoption of Industry 4.0 on Job creation in Nigeria.

Model, N=208	Beta	T	Sig.	R	R ²	Adj. R ²	Anova Sig.	F(df)
(Constant)	42.235	2.352	0.000	0.383 ^a	0.269	0.22	0.000 ^b	42.134 (1,021)
Adoption of Industry 4.0	0.396	2.310	.021					

- a. Dependent Variable: Job creation
- b. Predictor: (Constant), Adoption of Industry 4.0

Source: Researcher’s Field Survey Results (2024)

The regression analysis conducted on the effect of Industry 4.0 adoption on job creation in Nigeria, based on data from 208 observations, revealed a statistically significant model fit (R-squared = 0.254), indicating that approximately 26.9% of the variance in job creation can be explained by the adoption of Industry 4.0. The constant term was 42.235, representing the expected job creation when Industry 4.0 adoption is zero. Overall, the model was significant (F = 42.134, p < 0.001), indicating that the predictor collectively contributed to explaining the variance in job creation.

Table 1 above the regression coefficient for Industry 4.0 adoption was 0.396 (t = 2.52, p < 0.005), suggesting a positive relationship between the two variables. Therefore, adoption of industry 4.0 has statistically significant effect on job creation in Nigeria.

From Table 1 the regression model showing the effect of adoption of industry 4.0 on job creation is expressed as:

$$JB = 42.235 + .396 AI \dots\dots\dots eq. i$$

Where:

- JB = Job creation
- AI = Adoption of Industry 4.0

In the regression equation above, when the value of adoption of industry 4.0 is constant at zero, job creation was 42.235. The regression coefficient of adoption of industry 4.0 was 0.396, which imply that an increase in adoption of industry 4.0 by one unit leads to an increase in job creation level by 0.396 units. Results further indicate that adoption of industry 4.0 and job creation had a positive and significant effect ($\beta = 0.396, p < 0.05$). Therefore, the null hypothesis one (H_0) which states that adoption of industry 4.0 has no significant effect on job creation among insurance companies in Nigeria is hereby rejected.

Discussion of Finding

The favourable and considerable effect of implementing Industry 4.0 on job creation within insurance businesses in Nigeria resonates with past studies by Grenčíková et al. (2020), Rapanyane & Sethole (2020), and Sumer (2018), and may be further explained through numerous routes. Primarily, the incorporation of sophisticated technologies such as artificial intelligence (AI), machine learning, and automation simplifies repetitive operations, letting people to focus on more value-added activities. This change typically leads to the emergence of new employment opportunities, particularly in areas such as data analysis, predictive modeling, and cybersecurity, as insurers utilise data-driven insights to better decision-making and risk management procedures (Ojo, Olaleye & Ojo, 2020). Additionally, Industry 4.0 technologies permit insurers to increase their product portfolios and client reach, hence mandating the employment of qualified personnel in sales, marketing, and customer relationship management (Ezeh, Okorie, Okike, & Agwu, 2021). Moreover, the digitization of insurance operations promotes the emergence of novel business models, including peer-to-peer insurance and on-demand insurance channels, which may require specialized expertise in product creation, creative thinking, and digital marketing (Adesina, Ayo & Adebisi, 2020). Overall, the implementation of Industry 4.0 promises considerable prospects for employment development within the Nigerian insurance industry, as firms adjust to suit the increasing demands of the digital economy.

Implications

The practical implications of the study regarding the positive and significant effect of implementing Industry 4.0 on job creation among insurance companies in Nigeria are striking. Firstly, the incorporation of sophisticated technology helps insurers to optimize their operations, leading to higher production and efficiency. This optimization typically leads in the establishment of new employment categories that need specific skills in data analysis, programming, and digital marketing. Furthermore, Industry 4.0 promotes the extension of insurance services into previously underserved regions through digital platforms, offering prospects for employment growth in sales, customer service, and distribution networks. Moreover, as insurers innovate and broaden their product offerings to suit the demands of the digital era, there is a rising need for expertise in areas

such as product development, risk assessment, and regulatory compliance. Overall, the implementation of Industry 4.0 gives real potential for job creation and skills development within the Nigerian insurance sector, contributing to economic growth and employment generation in the country.

From the point of view of theory, the conclusion corresponds with the Technology Acceptance Model (TAM), which proposes that the perceived utility and simplicity of use of a technology strongly impact its adoption and usage behaviour. In the context of employment creation within insurance businesses in Nigeria, Industry 4.0 technologies are viewed as important instruments for boosting operational efficiency, expanding market reach, and promoting innovation. The positive association discovered between sector 4.0 adoption and job creation reflects the perceived benefit of these technologies among insurers and workers, promoting the adoption of new digital practices and skill sets across the sector. Moreover, the TAM framework underscores the importance of addressing perceived barriers to technology adoption, such as training needs and organizational culture, to facilitate successful implementation and maximize the potential benefits of Industry 4.0 for job creation and workforce development in the Nigerian insurance sector.

Conclusion

Addressing the positive and significant effect of implementing Industry 4.0 on job creation within insurance businesses in Nigeria emphasises the transformational potential of sophisticated technologies in generating economic growth and employment prospects. Through the integration of digital advances such as artificial intelligence, automation, and data analytics, insurers may streamline their operations, increase their market reach, and diversify their product offerings, leading to the emergence of new employment roles and skill demands. This finding not only highlights the practical benefits of Industry 4.0 adoption for job creation and skills development within the Nigerian insurance sector but also aligns with theoretical frameworks such as the Technology Acceptance Model, emphasizing the importance of perceived usefulness and ease of use in driving technology adoption behaviors. Moving forward, policymakers, insurers, and stakeholders must continue to invest in digital infrastructure, talent development, and supporting regulatory frameworks to maximize the socio-economic benefits of Industry 4.0 for job creation and sustainable development in Nigeria.

References

- Abuhassna, H., Yahaya, N., Zakaria, M. A. Z. M., Zaid, N. M., Samah, N. A., Awae, F., ... Alsharif, A. H. (2023). Trends on using the technology acceptance model (TAM) for online learning: A bibliometric and content analysis. *International Journal of Information and Education Technology*, 13(1), 131-142. <https://doi.org/10.18178/ijiet.2023.13.1.1788>
- Acemoglu, D., & Restrepo, P. (2019). Automation and new tasks: How technology displaces and reinstates labor. *Journal of Economic Perspectives*, 33(2), 3-30. <https://doi.org/10.1257/jep.33.2.3>
- Adenutsi, D. E. (2023). Entrepreneurship, job creation, income empowerment and poverty reduction in low-income economies. *Theoretical Economics Letters*, 13, 1579-1598. <https://doi.org/10.4236/tel.2023.136089>
- Adesina, T. B., Ayo, C. K., & Adebisi, A. A. (2020). Leveraging digital transformation for sustainable insurance business models in Nigeria. *International Journal of Financial Studies*, 8(2), 24-34.

- Aigbovo-Omoruyi, O. (2020). Efficiency of Insurance Industry in Nigeria: An Application of Data Envelopment Analysis. *Nigerian Journal of Risk and Insurance*, 10(1), 233-265.
- Beverly, C. L. (2021). *Other to Other (O2O): Expanding successful engagement outside your comfort zone*. IAP.
- Buyana, N. (2022). *The effect of the fourth industrial revolution on employment in the insurance sector in Cape Town, South Africa* (Doctoral dissertation, Cape Peninsula University of Technology).
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Deloitte Development LLC (Firm). (2020). The fourth industrial revolution: At the intersection of readiness and responsibility. Available at: <https://www.voced.edu.au/content/ngv:85995>
- Dwolatzky, B., & Harris, M. (2021). South Africa's 4th IR strategy: Huge gap between what's on the ground and what the Ramaphosa commission recommends. Retrieved from: <https://www.dailymaverick.co.za/article/2021-01-14-south-africas-4ir-strategy-huge-gap-between-whats-on-the-ground-and-what-the-ramaphosas-commission-recommends/>
- Eiser, K., Mayet, I., & Johnson, S. (2019). *4IR and the South African workplace*. Business Technology Media Company. Issued by Webber Wentzel, Johannesburg, 14 Aug. Available online: <https://www.itweb.co.za/content/DZQ58vVIRnXvzXv2>
- Ejo-Orusa, H. P., & Mpi, D. L. (2019). Reinventing the 'Nwaboi' apprenticeship system: A platform for entrepreneurship promotion in Nigeria. *International Journal of Advanced Research in Management and Social Sciences*, 8(9), 98-130.
- Ezeh, C., Okorie, N., Okike, E., & Agwu, M. (2021). Digital transformation in the Nigerian insurance industry: Challenges and opportunities. *Journal of Economics, Management, and Trade*, 28(4), 102-114.
- Fadun, O. S. (2023). Analysis of the impacts of insurance claims settlement on economic growth: The case of Nigeria. *International Journal of Business Ecosystem & Strategy*, 5(3), 51-59. <https://doi.org/10.36096/ijbes.v5i3.424>
- Fadun, O. S., & Shoyemi, O. S. (2018). Insurance investment funds and economic growth in Nigeria: An empirical analysis (2000-2015). *International Journal of Development and Management Review*, 13(1), 63-73
- Fox, L., & Signé, L. (2021). The fourth industrial revolution (4IR) and the future of work: could this bring good jobs to Africa. *Evidence Synthesis Paper Series* 51.
- Gaddi, A., Prashantha, C., & Shivashankar, K. (2021). A review of technology acceptance model (TAM)-origin, development & future directions. *International Journal for Research in Engineering Application & Management*, 6(12), 107-111. Retrieved from https://www.academia.edu/47781469/A_Review_of_Technology_Acceptance_Model_TAM_Origin_Development_and_Future_Directions
- Grenčíková, A., Kordoš, M., & Berkovič, V. (2020). The impact of industry 4.0 on jobs creation within the small and medium-sized enterprises and family businesses in Slovakia. *Administrative sciences*, 10(3), 71. <https://doi.org/10.3390/admsci10030071>
- Horváth, D., & Szabó, R. Z. (2019). Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities? *Technological forecasting and social change*, 146, 119-132. <https://doi.org/10.1016/j.techfore.2019.05.021>
- Israel, G. D. (2013). Determining sample size. *Journal of Business Research*, 1, 1-5. Retrieved from [https://www.psychosphere.com/Determining sample size by Glen Israel.pdf](https://www.psychosphere.com/Determining%20sample%20size%20by%20Glen%20Israel.pdf).
- Kiel, D., Müller, J. M., Arnold, C., & Voigt, K. I. (2017). Sustainable industrial value creation: Benefits and challenges of industry 4.0. *International journal of innovation management*, 21(08), 1740015. <https://doi.org/10.1142/S1363919617400151>
- Lu, Y. (2017). Industry 4.0: A survey on technologies, applications and open research issues. *Journal of Industrial Information Integration*, 6, 1-10. <https://doi.org/10.1016/j.jii.2017.04.005>
- Mayer, C. H., Wegerle, C., & Oosthuizen, R. M. (2021). The impact of the fourth industrial revolution on managers' sense of coherence. *International Journal of Environmental Research and Public Health*, 18(8), 3857. <https://doi.org/10.3390/ijerph18083857>
- Mrindoko, A. E. (2022). Impact of mobile money microcredit on financial performance of small business in Iringa municipality, Tanzania. *African Journal of Applied Research*, 8(1), 15-38. <https://doi.org/10.26437/ajar.03.2022.2>
- Müller, J. M. (2019). Business model innovation in small-and medium-sized enterprises: Strategies for industry 4.0 providers and users. *Journal of Manufacturing Technology Management*, 30(8), 1127-1142. <https://doi.org/10.1108/JMTM-01-2018-0008>
- Nafchi, M. Z., & Mohelská, H. (2018). Effects of Industry 4.0 on the labor markets of Iran and Japan. *Economies*, 6(3), 39. <https://doi.org/10.3390/economies6030039>
- Nimawat, D., & Gidwani, B. D. (2016). Challenges facing by manufacturing industries towards implementation of industry 4.0: An empirical research. *International Journal of Interactive Design and Manufacturing*, 16(4), 1-13
- Nurqamarani, A. S., & Soegiarto, E. (2021). Technology Adoption in Small-Medium Enterprises based on Technology Acceptance Model: A Critical Review. *Journal of Information Systems Engineering and Business Intelligence*, 7(2), 162-172.
- Ojeleye, Y. C., & Bakare, M. (2020). Transformation leadership and employee engagement: moderating role of organizational trust in confectioner industry. *International Journal of Intellectual Discourse*, 3(1), 2-16. Retrieved from <https://ijidjournal.org/index.php/ijid/article/view/5>
- Ojo, A., Olaleye, S. A., & Ojo, M. (2020). The role of artificial intelligence in the insurance industry: A systematic literature review. *Journal of Insurance and Financial Management*, 5(2), 169-188.
- Oladele, A. O., & Uzoma, E. M. (2018). Financial sector development and economic growth in Nigeria: An econometrics analysis, 1981-2017. *International Journal of Economics and Financial Management*, 3(3), 36-50

- Rapanyane, M. B., & Sethole, F. R. (2020). The rise of artificial intelligence and robots in the 4th Industrial Revolution: implications for future South African job creation. *Contemporary Social Science*, 15(4), 489-501. <https://doi.org/10.1080/21582041.2020.1806346>
- Rodrik, D. (2018). New technologies, global value chains, and the developing economies (Background Paper Series No. 1). Pathways for Prosperity Commission.
- Schwab, K. (2017). *The fourth industrial revolution*. Currency. Available at: <https://onwork.edu.au/bibitem/2017-Schwab,Klaus-The+Fourth+Industrial+Revolution/>
- Sharma, S. (2021). *Entrepreneurship development*. PHI Learning Pvt. Ltd..
- Sumer, B. (2018). Impact of Industry 4.0 on occupations and employment in Turkey. *European Scientific Journal*, 14(10), 1-17.
- World Economic Forum. (2016). The future of jobs: Employment, skills and workforce strategy for the fourth industrial revolution. Global Challenge Insight Report.
- Xu, L. D., Xu, E. L., & Li, L. (2018). Industry 4.0: state of the art and future trends. *International Journal of Production Research*, 56(8), 2941-2962. <https://doi.org/10.1080/00207543.2018.1444806>
- Zemanova, S., & Drulakova, R. (2016, October). Making Global Goals Local Business in V4 Countries: V4 Entrepreneurs and the UN Global Compact. In *Globalization and its Socio-Economic Consequences, 16th International Scientific Conference Proceedings, PTS IV* (pp. 2490-2497).