

DRIVING INCLUSIVE JOB CREATION THROUGH DIGITAL TRANSFORMATION IN EMERGING MARKETS

**¹Igwe, Chinyere Emmanuel Ph.D. and ²Okwurume, Clarence Nkasirim, Ph.D.
¹Maurison Academy, +2348033058765; cigwe1865@yahoo.com; & ²Department
of Business Administration, Faculty of Administration and Management, Rivers
State University Nkpolu-Oroworukwo, Port Harcourt**

ABSTRACT

The impact of digital transformation on job creation in emerging markets is the cynosure of this article, and it highlights both the opportunities and challenges of digital transformation. Digital technologies drive significant economic shifts, offering new pathways for survival, growth and opportunities for employment. Various sectors where the imprint of digital adoption has facilitated job creation included fintech, manufacturing, hospitality and e-commerce. These underscores the case studies like mobile banking in sub-Saharan Africa and IT services in Southeast Asia. However, the transition also presents challenges, including skill mismatches and low infrastructural development. A combination of qualitative analyses and case study approaches were used to understand these dynamics. Findings indicates that digital transformation holds promise for boosting employment, realizing its full potential deserves interventions and investment in human capital. We conclude with recommendations to foster environments conducive to leveraging digital advancements for sustainable jobs, advocating for a focus on continuous education reforms and infrastructure development.

Keywords: Digital transformation, Emerging Markets, Infrastructure Development, Policy Intervention, and Employment Generation

INTRODUCTION

Integrating technologies into areas of a business or economy fundamentally changes how operations function and how value is delivered to customers. It refers to accelerating transformation that organizations undertake through various activities to leverage change and maximize opportunities for digital technologies (Coefficient of Adaptability), strategically and prioritized, with present and future shifts in mind (Igwe, 2024). A wide range of technological advancements, such as data analytics, cloud computing, the Internet of Things (IoT) (Indonesia Digital Workforce, 2023), artificial intelligence, and mobile technologies, are transforming how businesses operate and deliver value to customers. Organizations innovate, which allows them to improve efficiency and streamline operations. Adopting digital technologies enables companies to offer personalized and engaging customer experiences. This increases customer satisfaction and loyalty (Morakanyane, et al., 2017). As organizations implement digital transformation, they are better positioned to respond to competitive pressures and market dynamics to achieve a sustainable competitive advantage.

Tornatzy and Fleischer (1990) posit that digital products and services expand market reach. This is made possible as digital technologies enables businesses to exploit new revenue streams, as digital transformation enhances the ability to gather and analyze data, leading to informed decision-making processes.

Eze et al. (2021) further stated that this has led to satisfaction and loyalty. Organizations implementing digitization have gained a competitive advantage to respond to pressures and changes in market. Igwe (2024) argued that they achieve sustainable advantage as digitization evolves new revenue streams. El-Yaniv and Zivan (2020) opined that digital products expand market reach as data-driven decision-making enhances informed decision-making. The relationship between digitization and job creation is complex, with opportunities and challenges. Digital technologies create jobs, enhance productivity, and lead to job loss.

Digitization involves the emergence of new jobs, especially in sectors driven by technology. Bessen (2019) stated that job creation abounds in data analysis, digital marketing, cybersecurity, social media, and software development. Whereas El-Yaniv and Zivan (2020) stated that, conversely, automation and the adoption of digital tools render jobs obsolete. Routine and manual tasks are very much vulnerable. This vulnerability lead to job losses which highlights the dual nature of digitization. The demand for information technology, data analysis, and digital communication skills is increasing, while traditional skill sets are no longer sufficient. This has necessitated workforce upgrades to meet new demands (World Economic Forum, 2020).

Statement of the Problem

The global nature of digitization raises questions about its implications for job creation in emerging markets. Nations and organizations are increasingly adopting digital technologies and creating new economic opportunities. Roser et al., (acknowledged that technological access and skills development disparities exacerbate the inequalities (2020). This literature delve into the imperative need for policies to harness the benefits of digitization for strata of society. Relationship between job creation and digital transformation is complex, involving opportunities and challenges. While digital technologies can create new jobs and enhance productivity, they can also lead to job displacement and require significant adjustments in skills and workforce development (Igwe & Okwurume, 2024).

Aim and Objectives of the Study

The aim of this article was to explore the creation of jobs with digital technologies in emerging markets and how the jobs spur economic growth and enhance competitiveness. Specifically, this study sought to:

1. ascertain the nature of the relationship between technology adoption and job creation in emerging markets.
2. determine the extent to which adopting digital technologies, innovations in e-commerce, mobile banking, and digital infrastructure affect the economy.
3. Identify key drivers and barriers that facilitate or hinder digital transformation in these markets.
4. evaluate the social and economic impacts through analysis of the implications of digital transformation on job creation, economic development, and social inclusion.
5. offer strategic insights for stakeholders' engagement through recommendations for businesses, policymakers, and investors on capitalizing on transformation opportunities.

REVIEW OF RELATED LITERATURE

Theoretical Framework

Technology-Organization-Environment (TOE) Framework: This framework posits that technological innovation adoption and implementation are influenced by the contexts of technology, organization, and environment (Tornatzky & Fleischer, 1990; Kililili, et al., 2024)). The technological context refers to the available technology and its compatibility with the existing system. Also, the organizational context encompasses the internal factors of organizational culture, structure, and resources, while the environmental context considers external factors of market trends, competition, and regulatory pressures. This framework helps in the understanding organizations navigate the complex nature of digital transformation through an assessment of technology readiness, organizational capacity, and environmental dynamics (Oliveira & Martins, 2011).

Diffusion of Innovations (DOI) Theory: Rogers (1962) explain how new ideas and technologies spread within and across organizations. The key components of the theory include innovation as the latest technology or process is adopted, the channels of communication through which information about the innovation is disseminated, the social system within which the innovation is introduced (Corrizzi, 2024). The theory helps organizations to understand the factors affecting and the resulting impact on processes, structures, and market positioning (Rogers, 2003).

Job Creation and Digital Transformation

Job creation and digital transformation are complex, intertwined with evolving opportunities and challenges. The technologies create jobs, enhance productivity, lead to job displacement, requiring adjustments in skills and workforce development (Brynjolfsson, & McAfee, 2014). It is, therefore, crucial to maximize the benefits of digital transformation while mitigating its adverse effects. Igwe (2019) argued that stakeholder collaboration is critical in fostering a resilient and adaptable workforce. To this end, an examination becomes necessary as experts posit that digital transformation leads to the emergence of new roles and industries. There are rises in job availability in data analysis, digital marketing, cyber-security, and software development, a reflection of the increase in demand for digital expertise (Bessen, 2019). It also follows that the adoption of automation and digital tools render some jobs obsolete. Examples include routine and manual tasks as particularly vulnerable to automation, leading to job losses. This phenomenon, known as creative destruction, highlights the dual nature of digital transformation (Frey & Osbourne, 2017). Skill requirements and workforce development needed for digital technologies are in a growing demand for skills related to information technology, data analysis, and digital communication. Traditional skill sets demand are at a low ebb, hence an urgency in workforce reskilling and up-skilling to mitigate the gap (World Economic Forum, 2020). Focusing on lifelong learning for the fast-paced nature of technological change requires continuous learning for workers to remain competitive. Organizations must invest in training programmes to help build relevant skills that adapt to evolving job roles (Gonzalez, 2021; OECD, 2019).

The changes in work dynamics occasioned by digital transformation facilitate remote work models, especially with events like the COVID-19 pandemic. This shift leads to job flexibility and raises challenges related to team collaboration and employee engagement (Choudhury et al., 2020). Added to this dynamic is the gig work growth that has given rise to digitization,

where workers take on short-term, flexible jobs secured from digital platforms. This trend provides opportunities for income generation even though they lack traditional job security, benefits, and protections (Gallup, 2020). The impact of digital transformation on job quality leads to improved jobs by increasing efficiency and reducing workload through automation. Employees can focus on complex and rewarding tasks, enhancing job satisfaction. However, the benefits of digital transformation cannot be distributed to all sectors and demographics equitably, hence disparities in job quality (Igwe & Okwurume, 2025). High-skilled workers may get increased opportunities, whereas low-skilled workers encounter stagnant wages and job insecurity (Berger et al., 2018).

The spate of employment opportunities arising from digital transformation has driven high economic growth, which stimulates the creation of new industries, increases productivity, and eventually creates more job opportunities across sectors (McKinsey Global Institute, 2021). Healthcare, manufacturing, fintech industries, and governmental departments have experienced varying impacts of digital transformation.

The Concept of Emerging Market

Emerging markets is the economy that are growing rapidly, characterized by a transition from low-income to middle-income status. International Monetary Fund (IMF) and World Bank identify these markets based on gross domestic product (GDP) growth, market liquidity, and political environment. Examples include Nigeria, Brazil, and India. The economic growth potential of emerging markets exhibits higher growth rates, rapid urbanization, burgeoning middle class, and increased consumption power that contributes to the market access and investment opportunities that spur economic growth. Emerging markets present significant investment opportunities for domestic and foreign investors, driven by the need for infrastructure and technological advancement (Igwe & Okwurume, 2025). Despite the growth paradigm of emerging markets, volatility, risk, instability due to inflation, currency fluctuation, and governance challenges that impact investors' confidence are constant experiences.

Demographic trends of the youthful population are a predominant feature of emerging markets. This trend has led to a robust labour force, which has the potential for innovation and consumption and stimulates economic growth in the long run. There are different levels of income inequality, educational level, and technology. The markets are fraught with underdeveloped infrastructure gaps, which present challenges and opportunities with poor reactions from the regulatory environment. Igwe (2024) posits that regulatory frameworks and public policies impede the development and growth of businesses. Hence, new laws or amendments are needed. This regulatory lacuna also affects globalization as emerging markets increasingly integrate into the global economy and enjoy foreign direct investment (FDI), trade policies, and international market dynamics based on the opportunities presented.

Technological Leapfrogging has helped emerging markets bypass stages of technological development, particularly in telecommunications and mobile technology, despite the effects of cultural factors of local customs, traditions, and consumer behaviors that significantly influence market strategies as companies adapt their offerings to resonate with local populations just as environmental considerations of rapid industrialization poses

environmental challenges in emerging markets, and requires balancing economic growth with environmental sustainability.

Impact of digital transformation on traditional industries.

It is a truism that technology has reshaped traditional industries and labor markets, bringing challenges and opportunities. New technologies have continued to cause ripple effects across sectors and have altered the nature of work and the employment landscape. Many traditional industries, including retail, manufacturing, and transportation, have encountered significant disruption from digital invasion. The example of the retail sector where a paradigm shift has occasioned e-commerce from the domination of giants like Jumia, Konga, Amazon, and Alibaba redefining consumers' shopping preferences abound. Traditional brick-and-mortar stores face declining sales as consumers prefer the convenience of online shopping (Deloitte, 2021).

Technologies, including automation, robotics, and artificial intelligence (AI), are increasingly being deployed in traditional industries, leading to concerns about job displacement. Routine and manual tasks are among the most vulnerable to automation. In manufacturing, introducing robotics for assembly lines has streamlined operations and enhanced productivity but also threatens job security for workers performing repetitive tasks. A report by Arntz, et al., (2016) indicates that manufacturing and administrative support jobs are at high risk of automation and technological invasion. Traditional industries adopt digital technologies; jobs are evolving, demanding new skills from workers. Digital literacy and technical skills have become increasingly preferred in the labor market. In agriculture, precision farming techniques require farmers to utilize data analytics and IoT devices to optimize production. The shift requires workers to develop new skills in technology and data management (Maghiar et al., 2020). In logistics and transportation, companies like DHL and FedEx utilize data analytics and IoT to optimize shipping routes and inventory management, resulting in cost savings and faster delivery times (McKinsey, 2021).

The transformation has brought greater emphasis on customer experience across traditional industries. Gonzalez et al. (2021) stated that many traditional organizations use technology to personalize services, enhance engagement, and improve delivery time, especially in the hospitality sector. Hotels and restaurants use digital tools to collect orders and analyze their feedback. The tools has improved services. Booking platforms like Airbnb, booking.com, wakanow.com, and travel.com have disrupted traditional hotel models, emphasizing user-generated content and reviews. Univocally, digital transformation opens new market opportunities for traditional industries to innovate and diversify their offerings. Organizations develop products and services that meet evolving consumer demands (Dwivedi, 2022). Traditional banks are establishing digital platforms and fintech partnerships to provide innovative solutions such as mobile banking and digital wallets, ultimately expanding their customer base (Zins & Weill, 2016).

Case Studies of Digital Transformation In Emerging Economies.

Digital transformation, as the process of integrating technologies into different areas of a business or economy, leading to fundamental changes in operations to ensure delivery of value to the customers, has gained traction in emerging economies of Nigeria, India, and Brazil, bringing about significant digital transformation across various sectors. These

technological advancements have ensured increased internet penetration and innovative business models focusing on enhancing financial inclusion, expanding e-commerce, and improving government services through digital platforms. These countries have positioned themselves for sustainable growth in the digital age. Let us have an overview of the digital journey.

Nigeria **Digital Payment Solution.**

Nigeria has seen remarkable growth from digital payment solutions, driven by mobile money revolution providers like Paga, Paystack, Moniepoint, and Flutterwave. These services have facilitated financial transactions and provided rural areas with access to banking services. A CBN (2021) report indicates that payment outside conventional banking halls has surged, promoting financial inclusion and boosting economic activities.

E-Commerce Growth.

The Nigerian e-commerce sector has expanded rapidly, with platforms like Jumia and Konga gaining significant traction. The COVID-19 pandemic accelerated online shopping as consumers shifted to digital platforms for convenience and safety. Suleiman (2020) said that e-commerce has continued growing, contributing to job creation and economic diversification.

Telecommunication and Internet Access.

Nigeria's telecommunication sector has developed significantly, with mobile internet penetration reaching more than 50% of the population. NCC (2021) reported that telecommunications companies like GLO, MTN, and Airtel have expanded their networks, providing digital services to remote areas and enabling greater access to online education, healthcare, and government services.

India

Startup Ecosystem

India is ranked as one of the world's leading technology startup hubs (Sakshi, 2022). The country's digital ecosystem is vibrant, with businesses like Ola, Zomato, and Paytm pioneering services that cater to local needs. KPMG (2021) states that the government's Startup India initiative in the Startup India project has led to massive entrepreneurship and attracted significant investment.

Digital Government Services.

The Indian government has promoted technological advancement to enhance the delivery of social services through digital platforms. Mukherjee et al. (2019) opined that the Aadhaar biometric identification system had streamlined excellent access to public services, which snowballed into improved efficiency in governance.

FinTech Growth.

The rise of FinTech in India is transforming the banking landscape. Mobile wallets and digital banking platforms provide locals convenient access to financial services. World Bank (2020)

reports showcased the valuable contributions which has made peer-to-peer transactions easy and fraud-free.

Brazil

Digital Economy and E-Commerce.

Brazil's e-commerce sector has experienced robust growth, driven by increased internet usage and changing consumer behaviors. Mercado Livre and others dominate the market. Online shopping accelerated by the COVID-19 pandemic, resulted in increased investments in digital logistics and infrastructure (Deloitte, 2021).

Social Media and Digital Marketing:

Brazil stands out as one of the largest social media markets worldwide. Dentsu (2021) asserts that its maximum usage of technology platforms like Facebook, Instagram, and WhatsApp for marketing and customer engagement leads to innovative strategies that drive sales and broaden customer reach.

Telecommunications Expansion.

Brazilian telecommunications companies are expanding digital infrastructure to ensure wider internet access across urban and rural areas. The National Broadband Plan (PNBL) aims to connect underserved populations, facilitating access to information, services, and opportunities for economic growth (ANATEL, 2021).

Implications of digital transformation in emerging markets.

Integrating technologies into different sectors in emerging markets has tremendously contributed to economic growth. Igwe (2024) posits that digital platforms leverage to improve access to information, financial services, and public services and foster economic inclusivity to drive sustainable development.

The widespread availability of mobile devices and improving internet infrastructure have accelerated digital transformation in emerging markets. In Nigeria, internet penetration has significantly increased. Nigerian Communications Commission (NCC) reports that mobile subscriptions exceeded 200 million in 2020, enabling individuals to utilize mobile banking, e-learning, and telemedicine services and fostering economic growth (NCC, 2021).

Digital transformation spurred the growth of fintech solutions and provided financial access through mobile money platforms, digital wallets, and online banking enhance financial inclusion. Jack & Suri (2011) reported that in Kenya, M-Pesa is a leading mobile money service that transforms individuals' financial transactions, enabling payments, savings, and loans and promoting regional entrepreneurship.

The growth of digital platforms has propelled the sporadic rise of e-commerce in emerging markets. The trend is prominent in the retail sector. KPMG (2020) reports that e-commerce contributes significantly to India's GDP. The power of data analytics tools in agriculture is being used to optimize crop yields and resource management. De Villiers (2020) reported that startups like Aerobotics are deploying drone technology and AI to provide farmers with insights on crop health and pest control, ultimately enhancing productivity.

Digital transformation has enhanced governance in emerging markets through transparency in public services. E-government initiatives facilitate better service delivery and citizen engagement. Ghana has introduced the Ghana Electronic Payment System (GhPAY) to optimize public revenue collection. The World Bank (2021) reported that efficiency has increased in service delivery, enabling citizens to access government services online.

Challenges and Barriers

Despite the benefits of digital transformation in emerging markets, challenges persist as follows:

- i. Infrastructure limitations of poor internet connectivity, and inadequate power supply.
- ii. Lack of digital skills in the workforce limits the effectiveness of digital initiatives.
- iii. Regulatory and policy barriers: Inconsistent regulations and bureaucratic hurdles can hinder the growth of digital enterprises.
- iv. Introduction of technologies leads to job loss.
- v. Gig workers lack health insurance benefits, retirement plans, and paid leave, leading to vulnerability.

CONCLUSION

Job creation benefits arising from digitization require a multi-dimensional approach that will encompass investment in infrastructure, workforce development, promotion of startups, and inclusive growth strategies. There should be collaboration between government and business to ensure the development of practical initiatives that will reap the benefits of technologies to create sustainable employment opportunities provided by digital transformation, ultimately enhancing economic growth and societal well-being. The future of research in digital transformation and job creation is poised to address complex and dynamic questions that reflect ongoing technological advancements and societal changes. By focusing on these emerging trends, researchers will contribute to the policy enunciation for strategies that support sustainable job growth and foster inclusive economic development in an increasingly digital ecosystem.

RECOMMENDATIONS

With the potential of inclusive job creation and digital transformation, organizations, governments, and educational institutions must adopt comprehensive strategies that encourage technological adoption while ensuring workforce readiness.

Investment in digital infrastructure to ensure robust digital infrastructure is critical for supporting businesses in their digital transformation efforts. Governments and private sectors should invest in high-speed internet, cloud computing, and reliable digital services by building public-private partnerships to expand broadband access, particularly in underserved rural and remote areas, enabling businesses to thrive and create more jobs.

Promoting digital literacy and skills development as technologies evolve is based on the growing need for a workforce equipped with the necessary skills to thrive in a digital economy. Initiatives should focus on reskilling and upskilling workers to prepare them for new job requirements through the implementation of training programs and vocational education initiatives that emphasize digital skills, data analysis, coding, and IT skills.

Supporting startups and innovation hubs to encourage entrepreneurship and innovation is essential for job creation. Governments and private organizations can foster startup ecosystems that promote creative solutions and digital services by providing financial incentives, mentorship, and resources to startups and small businesses engaging in digital transformation. Establish innovation hubs and incubators that facilitate knowledge sharing and collaboration among entrepreneurs.

Digital transformation has made leveraging technology for remote work opportunities possible. Expanding remote work will lead to job creation as organizations tap into a global talent pool and offer flexibility to workers through companies implementing flexible work policies and investing in digital collaboration tools that facilitate remote work. Expression of remote job opportunities can attract diverse talent from various geographical locations.

Comprehensive regulatory frameworks that would promote flexible labour markets while protecting workers' rights are essential. This is achieved through the development of policies that recognize digital gig workers.

Encouraging cross-sector collaboration among industries can enhance job creation by sharing best practices, innovation, and resources and bringing together stakeholders from different sectors.

Data and analytics can be used for decision-making, enabling organizations to identify market trends and areas with potential for job creation. Governments can also use this data to inform policies and effectively target supportive measures.

REFERENCES

- Aker, J. C., & Mbiti, I. M. (2010). Mobile Phones and Economic Development in Africa. *Journal of Economic Perspectives*, 24(3), 207-232. <https://doi.org/10.1215/00141801-1286292>
- Amazon. (2021). *Amazon 2020 Annual Report*. <https://ir.aboutamazon.com/annual-reports>.
- Arntz, M., Gregory, T., & Zierahn, U. (2016). The risk of automation for jobs in oecd countries: a comparative analysis. oecd social, employment and migration working papers, No. 189. OECD Publishing. <https://doi.org/10.1787/5jlz9h56dvq7->
- Arunma, O. (2018). Tech hubs in Nigeria: The emerging digital economy. *African Journal of Information Systems*, 10(1), 45-57.
- Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. *The Journal of Economic Perspectives*, 29(3), 3-30. <https://doi.org/10.1257/jep.29.3>
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- Berman, S. J. (2012). Digital transformation: Opportunities to create new business models. *Strategy & Leadership*, 40(2), 16-24.

- Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. V. (2013). Digital business strategy: Toward a next-generation of insights. *MIS Quarterly*, 37(2), 471-482.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-98
- Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. W. W. Norton & Company.
- Chakravorti, B. (2017). *The loop: How technology is creating a world without choices and how to restore them*. Houghton Mifflin Harcourt.
- Choudary, S. P., Parker, G. G., & Van Alstyne, M. W. (2016). Platform revolution: how networked markets are transforming the economy and how to make them work for you. Norton & Company.
- Cramer, J., & Krueger, A. B. (2016). Disruptive change in the taxi business: the case of uber. nber working Paper No. 22083. <https://www.nber.org/papers/w22083>
- Deloitte. (2021). *Global connected consumer survey: Brazilian Insights*. <https://www2.deloitte.com/br>
- Deloitte. (2021). *Global powers of retailing 2021: The future of retail is resilient*. <https://www2.deloitte.com>
- De Villiers, M. (2020). *How agriculture is using data analytics to achieve sustainability*. ITWeb. <https://itweb.co.za/news/8R63qAnEa3j6uyG9>
- El-Yaniv, R., & Zivan, A. (2020). Cloud computing adoption and its impact on organizations in emerging economies: an empirical investigation. *Journal of Information Technology*, 35(3), 206-225. <https://doi.org/10.1177/0268396218818858>.
- Eze, S. C., Chibueze, A. C., & Otokunefor, I. O. (2021). The Impact of Digital Collaboration Tools on Business Resilience during the COVID-19 Pandemic in Nigeria. *Journal of Management and Strategy*, 12(1), 38-50. <https://doi.org/10.5430/jms.v12n1p38>
- Fashola, B. (2020). Digital Nigeria: Making Nigerians competitive in the digital economy. <https://www.ncc.gov.ng>.
- Ferreira, J. J., & Eze, U. C. (2020). Digital transformation in emerging markets: The role of technology, innovation, and entrepreneurship. *International Journal of Technology Management*, 83(1), 1-18.
- Field, A. (2013). *Discovering statistics using ibm spss statistics* (4th ed.). Sage

Publications.

Fitzgerald, M., Kruschwitz, N., Bonnet, D., & Welch, M. (2013). Embracing digital technology: A new strategic imperative. *MIT Sloan Management Review*, 55(2), 1-12.

Friedman, G. (2021). Uber and Lyft Win California Gig Worker Law with Proposition 22.

Gallup. (2021). The gig economy: A new wave of work. <https://www.gallup.com/workplace/353643/gig-economy-new-wave-work.aspx>

Gartner. (2020). *Gartner Says 88% of organization around the world have encouraged or required employees to work from home due to coronavirus.* <https://www.gartner.com/en/newsroom/press-releases/2020-03-12-gartner-says-88-percent-of-organizations-around-the-world-have-encouraged-or-required-employees-to-work-from-home-due-to-coronavirus>

Gonzalez, A. C., et al. (2021). The Impact of Digital Transformation on Customer Experience in the Hospitality Industry. *Journal of Services Marketing*, 35(2), 237-250. <https://doi.org/10.1108/JSM-10-2020-0384>

The New York Times. Retrieved from <https://www.nytimes.com>

Government of India. (2021). Startup India. <https://www.startupindia.gov.in> Ministry of Electronics and Information Technology, India. (2020). Digital India Programme. <https://www.digitalindia.gov.in>

Gupta, S., & Goyal, A. (2019). E-commerce in emerging markets. *Information Systems and e-Business Management*, 17(1), 1-24.

Igwe, C. E. (2019). *Urban development of a city in the Niger Delta region of Nigeria.* Walden University. Doctoral Dissertation. waldenlibrary.com.org.

Igwe, C. E. (2024). Fundamentals of law and public policy: assessment of a government agency in South-South, Nigeria. *Journal of Intellectual Property and Human Rights*. 3(10) <http://journals.academiczone.net/index.php/jiphr>

Igwe, C. E. & Okwurume, C. N. (2024). Disruptive technology implementation and sustainable entrepreneurship development. *Research Journal of Pure Science and Technology*. 3(5). www.iiardjournals.org Online Version.

International Telecommunication Union (ITU). (2022). *Measuring digital development: Facts and figures* <https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx>

- International Labour Organization. (2021). *World employment and social outlook 2021: navigating the covid-19 crisis and future of work*.
<https://www.ilo.org/global/research/global-reports/weso/2021/lang--en/index.htm>
- Kallbekken, S., & Sælen, H. (2019). Internet of things and emerging markets: Impact on growth and value creation. *International Journal of Economics and Business Administration*, 7(1), 12-27.
- Kiron, D., Prentice, P. K., & Ferguson, R. B. (2013). Innovating with analytics. *MIT Sloan Management Review*, 54(1), 47.
- Koller, D., Blanc, A., & Nissler, R. (2013). *Massive open online courses are the future of education*. coursera blog. <https://blog.coursera.org>
- Kotter, J. P. (1996). *Leading change*. Harvard Business Review Press.
- Kumar, M. (2021). The impact of mobile money on financial inclusion in Nigeria. *International Journal of Economics and Finance Studies*, 13(1), 45-62.
<https://doi.org/10.34109/ijefs.2021.13.1.04>
- Maghiar, A., et al. (2020). The influence of digital transformation on the agricultural sector literature review and practical implications. *Sustainability*, 12(19), 7886.
<https://doi.org/10.3390/su12197886>.
- McKinsey & Company. (2021). *The future of work after covid-1*. <https://www.mckinsey.com>
- McKinsey & Company. (2021). *The future of mobility is here*. <https://www.mckinsey.com>
- McKinsey & Company. (2020). *Industry 4.0: How to navigate a changing manufacturing landscape*. <https://www.mckinsey.com>
- McKinsey Global Institute. (2019). *A labour market that works: aligning skills and jobs to the future of work*. <https://www.mckinsey.com>
- Ministry of Science, Technology, Innovations and Communications, Brazil. (2018). *Internet para Todos*. <https://www.gov.br/mcti>
- Morakanyane, R., Grace, A. A., & O'Reilly, P. (2017). Conceptualizing digital transformation in business organizations: A systematic review of literature. In *Proceedings of the 30th Bled Conference: Digital Transformation – From Connecting Things to Transforming Our Lives* (pp. 427-444).
- NASSCOM. (2020). Indian IT-BPM Industry: Annual Report 2020. Retrieved from <https://www.nasscom.in>
- Naylor, M. D., et al. (2020). *Telehealth and digital care access: the current state*. health affairs. <https://doi.org/10.1377/hlthaff.2020.006166>

Nigerian Communications Commission. (2021). Year 2020 Subscriber Data.
<https://www.ncc.gov.ng>

Organisation for economic co-operation and development. (2019). accelerating skills development for digital transformation. OECD Publishing. <https://doi.org/10.1787/7e7e8b92-en>

OECD. (2019). Accelerating skills development for digital transformation. <https://www.oecd.org>

OECD (2016). The risk of automation for jobs in oecd countries: A comparative analysis. oecd social, employment and migration working papers, No. 189. OECD Publishing. <https://doi.org/10.1787/5jlz9h56dvq7-en>

Padda, I. U. H., & Bhatti, N. (2021). Exploring the impact of digital transformation on the business models of emerging markets. *Business Process Management Journal*, 27(7), 1901-1923. <https://doi.org/10.1108/BPMJ-06-2021-0287>.

Papers, No. 189. OECD Publishing. <https://doi.org/10.1787/5jlz9>

SkillsFuture Singapore. (2021). *Skillsfuture*. <https://www.skillsfuture.gov.sg>

European Commission. (2016). *General Data Protection Regulation*. <https://ec.europa.eu>

Suleiman, M. (2020). E-commerce and economic development: A review of Jumia in Nigeria. *Journal of Business Research*, 112, 536-544.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207-222.

Twiga Foods. (2021). About us. <https://twiga.com>

UK government digital service. (2020). GovTech. <https://www.gov.uk/government/organisations/government-digital-service>

UNCTAD. (2021). *Digital economy report 2021: Cross-border data flows and data localization*. <https://unctad.org/webflyer/digital-economy-report-2021>

United Nations conference on trade and development (unctad). (2021). *digital economy report 2021: Cross-border data flows and data localization*. <https://unctad.org/webflyer/digital-economy-report-2021>

Wamba, S. F., Akter, S., Edwards, A., Chopin, G., & Gnanzou, D. (2017). How can big data analytics drive business performance? *International Journal of Production Economics*, 165, 234-246.

Westerman, G., Bonnet, D., & McAfee, A. (2014). *Leading digital: Turning technology into business transformation*. Harvard Business Review Press.

World Bank. (2021). *Ghana - digital revolution and economic growth: challenges, prospects and recommendations*. <https://www.worldbank.org>.

World Economic Forum. (2020). The future of jobs report 2020. <https://www.weforum.org/reports/the-future-of-jobs-report-2020> Working Papers, No. 189. OECD Publishing. <https://doi.org/10.1787/5jlz9h56dvq7-en>

Zhang, J., et al. (2020). The rise of the gig economy and its influence on modern labor markets. *Journal of Economic Perspectives*, 34(2), 183-206.

Zins, A. H., & Weill, L. (2016). The digitalization of financial services: the case of fintech in developing economies. *Journal of Financial Services Research*, 50(3), 348-369.