AFRICA INTERNATIONAL CONFERENCE ON EDUCATION

18 – 20 April 2024

"Education in the Global South in the Era of Digital Economy"

Proceedings

Editors

Clement Simuja
Mogalatjane Matabane
Tawanda Chinegundu
Christopher Omoregie
Emmanuel Orji

ISBN 978-1-0370-1406-2

Published by

African Academic Research Forum

www.aa-rf.org

E-mail: info@aa-rf.org

Table of Contents

SAFETY AND DIGITAL ECONOMY IN THE GLOBAL SOUTH: AN EDUCATOR'S APPROACH

Funmilola E. Akinyooye
University of Ibadan, Nigeria
fe.ojo@ui.edu.ng/ojofunmiloa@gmail.com

Abstract

The rapid growth of the digital economy has created various opportunities for individuals, organisations and communities particularly in the Global South. High rates of poverty and wealth inequality plague many of the Global South nations such as China, India, Indonesia, Brazil, Pakistan, among others which has resulted in notable differences in the digital divide and restricted access to education. Education systems in the Global South often face challenges such as inadequate infrastructure, insufficient funding, and a shortage of qualified teachers. The digital economy's disruptive effect can also be seen in a variety of sectors, including health, family life, financial services and communication networks. These problems require safeguarding individuals' safety and security in the ever-changing contexts. This paper uses systematic literature and critical analysis to investigate the main significant benefits of an internet-based economy with improved access to information and markets, job prospects, and economic growth. It will then introduce the notion of safety education in a digital economy and its role in equipping individuals to traverse the digital landscape. Safety education can help to reduce the risks posed by digital economy.

Keywords: Safety, digital economy, Global South, educator's approach

Introduction

Global human behavior has changed significantly as a result of the advancement of Information and Communication Technology (ICT), both in the Global North and Global South. ICT is used to enable digitalization, which refers to " any application or communication equipment, such as satellite systems, computers, mobile phones, radios, TVs, network hardware, and software, as well as any related applications " by Nwakoby, *et al.*, (2021; 57). Digital technology has completely changed how businesses work throughout the world, from e-commerce to business process outsourcing (Adan & Reuben, 2020; Akintoye, 2021). Some countries especially in the Global North including the so-called Asian Tigers have been able to transform their economies from e-economy to k-economy. E-economy is an economy that is characterized by extensive use of the internet and information technology. The K-economy, also known as the knowledge-based economy, is a type of economic structure where the primary means of producing products and services are knowledge-intensive endeavors that foster the progress of technical and scientific innovation. The term "knowledge economy" was further defined as an economy where worker knowledge is a crucial input for both national and organizational success. (Opunne & Pritta 2023; 3). Though, the Global North have been able to change from digital economy to knowledge based economy where knowledge and information are the major contributors to economic growth, the Global South are still experiencing challenges with the digital economy.

The Global South are still battling with infrastructural deficiencies resulting in poor digitalization of their economies. With fast-growing youth population, that is, the Gen-Z, and ever-increasing smartphone penetration, the Global South is witnessing an up-surge in e-commerce spending. For instance, in Nigeria, e-commerce spending is now anticipated to be worth US$20 billion, and by 2026, revenue is expected to reach US$75 billion annually (Nwakoby, Okoye, &Chukwurah, 2021).

Following COVID 19 epidemic, there has been a paradigm change in the global economy as businesses, governments, and entire societies have reorganized around the increasing significance of digital technology in daily life. The digital economy has become significant because according to a World Economic Forum research from 2023, the digital economy makes up a sizable portion of the world economy (16%, or $11.5 trillion), with the African continent expected to have a digital economy of over $300 billion by 2025. The World Economic Forum projects that by 2022, more than 60% of the world's GDP will be digital, and that in the next ten years, digital platforms will be utilized to generate over 70% of new value (Ahmad & Ahmad, 2023). The US economy benefited from 5.1 million new employment created by the digital economy in only 2017 (The World Economic Forum Report, 2023).

Therefore, it is not only pertinent but also imperative to conduct a fresh evaluation of the value of ICT investments in the context of the global digital economy. However, as the use of ICT is necessary for workers in the digital economy, there is also an increase in the prevalence of digital risks attached to the usage. This will necessitate a need for the use of safety training to mitigate the rising digital risks for workers as they avail themselves the opportunities of digital economy and advancement in technology.

Digital Economy in the Global South

In addition to being a metaphor for underdevelopment, the phrase The term "Global South" also encompasses the whole historical record of colonialism, neo-imperialism, and unequal economic and social progress, leading to notable differences in life expectancy, standards of living, and the availability of resources for development. It is generally related to the continents of Asia, Africa, Latin America, and Oceania. It is part of a family of expressions that characterize regions outside of North America and Europe that are regularly marginalized politically and culturally and are usually (but not always) low-income (Karim, Paolo & Samir, 2023).

The phrase "Global South" refers to a shift in attention from the prior emphasis on cultural variety or development to the current emphasis on geopolitical power relations. Since its start, sociology has provided concepts for describing global variance. From Emile Durkheim and Lester Frank Ward to Auguste Comte and Herbert Spencer, sociologists who examined social evolution often distinguished between “advanced” and “primitive” institutions and societies. Both then and today, on the worlds they had colonized, they discovered the primitive. Because of empire and colonialism, intellectuals in Europe and North America were flooded with

information about other countries from the fifteenth to the nineteenth century (Karim, et al., 2023).

Although most people in the Global North are often ignorant of the most recent developments in the Global South, the media in the North regularly publishes news on the digitization initiatives taking place in the Global South, notably in Africa (Marianna and Akram, 2023). It demonstrates how Africa is leapfrogging growth and closing the digital divide, how it is home to global tech clusters and start-ups, and how it offers an untapped talent pool for digital work. Transnational corporations are offering the African continent a wider range of services as governments from China, Europe, the USA, development organizations, civil society, and academics promote, execute, or study digitalization in the Global South (Marianna and Akram, 2023). Furthermore, with much of the Global South striving for digitalization, a new field for technology assessment (TA) has emerged in an increasingly interconnected world where shared responsibilities are required (Amitendu, 2023).

The core cause of TA, which raises ethical and political concerns regarding engineering, is Western Hemisphere technology-related difficulties, particularly those in the US during the 1960s (Mokaddem, 2023). In addition to the industrial and/or specialized technologies, new super companies and individual users created a new type of customized technology at the same time. The 1990s saw a rise in the public's use of information and communications technology (ICT), which led to the emergence of new aspects of technology-assisted translation (TA). These included multicultural values, international laws, personal accountability, and global initiatives aimed at enhancing society through technology (Shivam, 2023).

The digital economy has emerged as a potent driver of economic growth within the Global South. Along with big corporations, small and medium-sized enterprises too have harnessed its power to tap into broader markets (Adegboyega, et al., 2022). One of its transformative impacts is the democratization of financial services **(**Abdullahi, *et al.*, 2019; Akintoye, 2021). Digital payment solutions have smashed barriers, extending financial access to previously marginalized communities (Akujor, *et al.*, 2019). This digital wave has fuelled e-commerce further, driving increased economic activity and creating fresh job opportunities (Teryima & Ayegba, 2019). Thus, the digital economy's impact has been profound, altering the very fabric of economic interactions and opening doors to unprecedented growth, innovation, and access to financial services. Both productivity and socioeconomic growth are aided by it. One can take part in global value chains by increasing productivity through the adoption and application of digital technology in economic operations. Through the use of network effects, economies of scale, and the elimination of information asymmetry, digitalization helps to boost efficiency (Xiaoya, *et al.*, 2024).

Numerous affluent nations have established a robust digital ecosystem and extensively leverage the advantages of digitization within the socio-economic domain. Therefore, regardless of a nation's development level, the growth of the digital economy may aid in social and economic transformation. Any level of development may leverage digital technology to speed up the delivery of high-quality healthcare, education, and government services if they are organized

properly. There are issues with the digital economy's expansion. The labor market is significantly altered by digitalization, which also contributes to the changes that are the primary cause of the rising economic disparity. Digitalization provides new employment while eliminating old ones. These labor market shifts are concerning because digitization has the potential to exacerbate already-existing income inequality and raise unemployment. States now face additional difficulties as a result of the decentralization, network effects, and rapid dissemination of technical features that are essential to the development of the digital economy (Xiaoya, *et al.*, 2024).

The state's customarily based trade and taxation policies are put to the test by the digital economy, which is defined by the cross-border production and consumption of digital products and services. The national tax, health insurance, education and training systems are under threat from the expansion of the sharing economy and internet platforms like Uber and Airbnb. International data transfers that transit via different nations present protection-related issues. State structures and businesses are becoming more and more reliant on digital technologies, which increases their susceptibility to cyberattacks. Among the many intricate socio-economic challenges that require consideration are the digital gap, privacy concerns, and regulatory difficulties (Bucea, *et al.*, 2020; Vassilakopoulou & Eli, 2023). In many emerging economies, there is a deficiency of fundamental digital infrastructure, which hinders the full potential of the digital economy. Developing nations also exhibit a certain degree of technical dependency (Acemoglu & Restrepo, 2018; Afzal, *et al.*, 2023). However, because they do not have to invest vast sums of money in creating cutting-edge digital solutions, poor nations have the opportunity to gain the most from digitization. Incorporating developing nations into strategic planning is crucial to optimize the developmental benefits of digitalization.

Digital Economy's Impact in the Global South

The digital economy has a wide range of complicated impacts on the Global South, affecting several facets of development, the economy, and society. Some of the major effects include access to information and communication, economic growth and job creation, entrepreneurship and innovation, agricultural transformation, infrastructure and digital divide, data privacy and security concerns, dependency and inequality, education and skills development and healthcare innovation among others. The digital economy has enabled greater access to information and communication technologies (ICTs) in the Global South. This has facilitated communication, dissemination of information, and access to educational resources, thereby bridging the digital divide to some extent. In the same vein, it has the ability to boost economic expansion and generate job possibilities. It has also facilitated the rise of new industries such as software development, content creators, e-commerce, digital services, creating jobs in these sectors. It provides new opportunities for businesses to reach global markets and enhance productivity (Cai & Niu, 2021).

The digital economy has lowered barriers to entry for entrepreneurs in the Global South. With access to online platforms and tools, individuals and small businesses can more easily reach global markets, innovate, and create new products and services. The Global South's financial inclusion has increased because of digital financial services like internet banking and mobile

money. Through these services, those who were previously shut out of the official financial system can now access credit, savings, banking, and insurance services. The use of digital technologies in agriculture known as 'agritech' or 'agtech' helps to enhance farming practices, improve yields and connect farmers to markets by contributing to food security and economic development (Li, *et al.*,2021).

Digital economy in the Global South has led to healthcare innovation and has social impact. Digital technologies can improve healthcare access and delivery. Telemedicine, health information systems and mobile health applications have the potential to enhance healthcare services especially in remote or underserved areas with limited access to traditional services. The digital economy in recent years has played a wonderful and effective role in the delivery of quality health services in the Global South. For example, the government of Nigeria recognized the value of using an ICT-driven health insurance program to provide high-quality, reasonably priced healthcare to the country's growing population. In order to provide for the Promotion, Regulation, and Integration of Health Insurance Schemes in Nigeria as well as for other related matters, the National Health Insurance Scheme, (NHIS) ACT was promulgated in 2004. Later, in 2022, a much-improved Act—the National Health Insurance Authority (NHIA) ACT—was enacted. Some of the positive effects of digital economy to healthcare include telemedicine, health information systems and Mobile Health (mHealth). Digital economy allows remote healthcare consultations and diagnosis, improving access to medical services in remote or underserved areas. Digital tools facilitate the management and analysis of health data, leading to better informed decision-making by healthcare professionals and policymakers while Mobile applications and text messaging services contribute to health education, preventive care and medication adherence (Abbas, *et al.*, 2022).

The family life of the people in Global South has been affected by digital economy in different ways. Some of these include connectivity, education and learning. Digital communication tools such as social media, messaging applications, video calls help families stay connected even when geographically separated. Online educational resources support distance learning and provide opportunities for family members to access education and skill development. Online learning and skill development are advantages of digital economy to the educational sector. Digital economy supports online education, making learning resources more accessible to individuals in remote or rural areas. E-learning platforms and digital skills training programs empower individuals with the knowledge and skills needed for personal and professional growth. Communication network has also been influenced positively by digital economy bringing connectivity, access and social connectivity. Digital infrastructure, including mobile networks and broadband, expands access to communication networks, enabling people to connect, share information and participate in the global digital ecosystem. Social media platforms and communication applications contribute to social interactions, networking and the exchange of ideas across diverse communities (Liu, *et al.*, 2023).

Financial Services have been tremendously impacted by the digital economy. It promotes financial inclusion by giving those who were previously unbanked or underbanked access to banking and payment services, digital banking and mobile money services improve financial inclusion. Digital economy fosters the growth of financial technology (fintech) solutions,

leading to innovations in payment systems, lending and investments. ICT driven financial institution in digital economy gave birth to what is known today as *FINTECH*. Energized youths who are versatile in usage of modern developmental applications (popularly called apps) are rising up to the occasions, developing world class financial solution apps thereby making the sub-Sahara Africa in the Global South a versatile incubation hub for talents and start-ups. Examples of Fintechs according to Huang, *et al.*, (2023) making wave in recent times:

INTERSWITCH – founded by Mitchel Elegbe pioneer inter-bank ICT driven Solutions in Nigeria. As at today, the Fintech company is worth billions of Naira and has been taken over by Mastercard. With a wide range of goods, including Verve, the largest credit card network in Africa, is the oldest fintech firm.

FLUTTERWAVE – Founded in 2016, Flutterwave Payments, Application Programming Interfaces (APIs)APIs enable organisations to create customisable payment apps using a variety of software development kits (SDKs) and plugins. Furthermore, consumers worldwide may utilize this service to purchase goods from African retailers thanks to the company's partnership with PayPal.

PAYSTACK – was founded in 2015 by Shola Akinlade and Ezra Olubi. They connect multi-channel payment options (debit cards, credit cards and direct bank transfers) with businesses to enable them to receive payments globally on the web or mobile.

MONIEPOINT – was founded by Tosin Eniolorunda and Felix Ike in 2015 focusing on providing financial solutions for businesses by bringing a simple offer: a banking app and card that works and also striving to be the gateway to bring financial happiness to consumers and businesses across Nigeria.

OPAY – was founded by Opera Norway AS Group in 2018 with footprints in emerging markets across Asia, Africa and Latin America in countries like Mexico, Nigeria, Egypt and Pakistan. The Covid-19 pandemic accelerated the wave of digitization especially in Nigeria having nearly 50% adult population not banked and lacking access to financial services. It gives merchants instant transaction settlement and the capability to follow the transactions in real-time.

Challenges of Digital Economy in the Global South

However, though the digital economy offers opportunities, challenges remain in terms of infrastructure and connectivity. Many regions in the Global South still lack reliable internet access and adequate digital infrastructure, worsening the digital divide between urban and rural areas and within marginalized communities. Thus, efforts are needed to address this divide by the provision of affordable access and promotion of digital literacy. Data security and privacy are becoming more and more of a problem as the digital economy grows throughout the Global South. Strong data protection laws and cybersecurity precautions are required as more people and organizations interact online in order to secure sensitive and personal data. There is a risk

of increased dependency on digital technologies and platforms owned by multinational corporations, which may exacerbate economic inequalities and limit local autonomy in the Global South. Access to online educational resources can help bridge educational gaps in the Global south (Obeng, *et al.,* 2024).

One of the negative effects of digital economy to financial services is digital exclusion. Even with the efforts put in the promotion of financial inclusion, not everyone has equal access to digital financial access in the Global South, creating a digital divide in financial inclusion. Cybersecurity Risks is another negative effect. Financial transactions conducted online are susceptible to cyber threats including fraud, identity theft and hacking. Communication network also has its own negative impact of digital economy which can be in form of Digital divide in connectivity. Unequal access to reliable internet and communication networks can worsen existing social and economic disparities, limiting opportunities for those with limited connectivity. Dependency on digital platforms which is overreliance on digital platforms may result in vulnerabilities as disruptions in digital services can have widespread consequences (Obeng, *et al.,* 2024).

The Healthcare Sector can also experience digital divide in health access. Various disparities in access to digital health tools widens the existing health inequalities with some populations having limited access to telemedicine or health apps. Privacy concerns is another issue while using digital technology in the health sector. The use of health data in digital systems raises privacy concerns and inadequate data protection measures can lead to unauthorised access and misuse. There are negative effects of digital economy to education. Limited access to online learning in areas with poor internet infrastructure where students may face challenges accessing online educational resources, thereby exacerbating educational inequalities. Digital illiteracy also poses as a barrier. The digital divide is not only about access but also about digital literacy with some individuals lacking the skills needed to navigate online learning platforms effectively (Mesfin, *et al.*,2024).

Family life can also be severely and negatively impacted by digital economy in form of digital distraction. Sub-Sahara Africa practices a cultural driven family system. However, colonialization came with negative influences which affects the family communication culture. These days, young children get early access to digital devices, which is very different from what their parents experienced. They now utilize computers and cell phones in their daily lives, which affects the communication style inside their family. Extended screen time and digital distractions can lead to less in-person family engagement, which impacts negatively on the quality of relationships. Pediatricians, for example, highlight the potential decline in emotional, cognitive, and motor skills from prolonged use of digital devices due to health hazards linked with it. Therefore, it is advised by Sezgin, & Fırat (2024) that children under the age of five use digital devices extremely seldom. The use of digital platforms may also expose families, especially children and adolescents to cyberbullying and online harassment.

Digital technologies offer new avenues for skill development and learning, empowering individuals with the knowledge needed for the modern workforce. While the digital economy

presents opportunities for growth and development in the Global South, careful attention must be paid to address challenges such as the digital divide, infrastructure limitations, and concerns around privacy and inequality to ensure inclusive and sustainable digital transformation. Thus, there is a need for safety education in the digital economy to reduce the risks arising from the use of digital technology (Xiaoya, *et al.*,2024).

Safety Education in the Digital Economy

Safety Education in the digital economy refers to the process of educating individuals and communities on how to use digital technologies safely and responsibly. As our world is becoming increasingly interconnected and reliant on digital tools, it becomes very crucial to address various risks and challenges associated with the digital environment. It is an ongoing and evolving process, given the rapid advancements in technology. It plays a crucial role in empowering individuals to navigate the digital landscape securely, fostering a culture of digital responsibility and resilience. The following are the key aspects of safety education in the digital economy which should be incorporated into the training contents for different categories of people in the Global South:

1. Data Literacy: Understanding data collection by informing individuals on how their data is collected, stored and used by digital platforms, empowering them to make informed decisions about sharing personal information.
2. Health and Well Being: Balancing screen time by promoting a healthy online and offline activities to prevent issues related to excessive screen time, such as digital eye strain and sedentary behaviour. Digital wellness encourages practices like taking breaks from screens, establishing healthy sleep habits and maintaining overall well-being in a digital age.
3. Safe Online Communication: Social Media Literacy helps individual communicate effectively on the social media, recognize the potential risks and navigate the online interactions without compromising personal safety. Also, the education of children and teenagers on the awareness of online predators for them to report any suspicious activities.
4. E-Commerce Safety: The provision of necessary guidance and conducting of secure online transactions, recognizing secure payment methods and avoiding potential online scams and frauds.
5. Online Privacy and Security**:** Users must be educated on the importance of adjusting privacy settings on social media platforms and online accounts to control the visibility of personal information. Cover topics such as privacy settings on social media platforms, data sharing risks and the significance of reading privacy policies and terms of service before using online services. Also, the provision of information on cybersecurity practices such as using strong passwords, recognizing phishing attempts and securing personal devices. Emphasize the significance of using strong, unique passwords for all online accounts. Teach participants about password hygiene, including the use of password managers, avoiding password reuse and enabling two-factor authentication where possible.
6. Digital Citizenship**:** Promotion of responsible and ethical behaviour in digital spaces including respect for others, avoiding cyberbullying and understanding the consequences of online actions and development of critical thinking skills to evaluate information found online, discerning between reliable and unreliable sources, avoiding the spread of misinformation.

7. Cybersecurity Awareness: educate individuals about the importance of cybersecurity and the potential risks associated with digital activities. Teach them about common cyber threats like malware, phishing, ransomware and social engineering attacks.
8. Safe Browsing Habits: teach individuals about safe browsing practices, including avoiding suspicious websites, only downloading software from trusted sources, and being cautious when clicking on links or downloading attachments in emails.
9. Social media Etiquette: highlight the potential consequences of inappropriate or careless social media behaviour. Encourage training participants to think before posting, avoid sharing sensitive information publicly, and manage their online reputation effectively.
10. Mobile Device Security: discuss security measures for mobile devices, such as enabling device lock screens, using app permissions judiciously, and installing reputable security apps. Emphasize the importance of keeping devices and apps updated to protect against vulnerabilities
11. Phishing Awareness: train individuals to recognize phishing attempts, which often involve fraudulent emails, text messages, or phone calls that aim to trick recipients into revealing sensitive information. Teach them to verify the authenticity of requests before sharing any personal or financial details.
12. Data Backup and Recovery: educate individuals about the significance of regular data backups to protect against data loss caused by hardware failures, malware attacks, or other incidents. Teach them about various backup methods and the importance of testing data restoration procedures.
13. Incident Reporting: establish clear procedures for reporting security incidents or suspected compromises. Encourage individuals to report any suspicious activities promptly so that appropriate actions can be taken to mitigate potential risks.
14. Ongoing Training and Awareness: digital risks evolve rapidly, so it is important to provide regular updates and refresher training sessions to keep participants informed about emerging threats and best practices.

CONCLUSION

Safety education in the digital economy is an ongoing and evolving process, given the rapid advancements in technology. It plays a crucial role in empowering individuals to navigate the digital landscape securely, fostering a culture of digital responsibility and resilience. It is then pertinent for all stakeholders to consciously put-up concerted efforts in carrying out regular campaigns, awareness and trainings on digital safety. Government in the global south at all levels should organise public campaigns through the use of media such as television, radios and social media to disseminate different types of digital safety education. Employers of labour should also conduct frequent digital safety training for their employees to safeguard them against prevailing digital risks. Individual citizens are also expected to keep abreast of safety training tips relevant to the different types of digital gadgets they use from time to time for their daily financial, economic, health and recreational activities. Therefore, safety training on digital risks should be tailored to the specific needs and risks faced by individuals or organisations. It is also essential to create a culture of security awareness and encourage individuals to take personal responsibility for their digital safety. This will help the people to

enjoy the positive impacts of digital economy while overcoming the challenges, risks and threats posed by technological advancements.

References

Abbas, A., Luo, X., Wattoo, M. U., & Hu, R. (2022). Organizational behaviour in green supply chain integration: Nexus between information technology capability, green innovation, and organizational performance. Frontiers in Psychology, 13, 874639.

Abdullahi, M. S., Ummi, R. S. & Bashir, M. U. (2019) Impact of information communication technology on organizational productivity in the Nigeria banking industry: empirical evidence *Noble International Journal of Business and Management Research;* 3 (1); 01-09.

Acemoglu, D., & Restrepo, P., (2018). The race between machine and man: implications of technology for growth, factor shares and employment. *J. American Economic Review* 108 (6), 1488–1542.

Adan, A. D. & Reuben, J. M. (2020). Effect of information communication technology innovation policy, training and skills on efficiency of service delivery in private laboratories in Kenya; *International Journal of Research and Innovation in Social Science*, 4 (9). 2454-6186.

Adegboyega, I. O., Aderemi, O. A.J., Oladimeji, A., Bolaji, H. B. & Adebayo, W. L. (2022) Analysis of the Impact of Information and Communication Technology on Nigeria Bottling Company's Organisational Performance; *Acta Universitatis Danubius*; 18 (1); 22-31.

Afzal, A., Khan, S., Daud, S., Ahmad, Z., & Butt, A. (2023). Addressing the Digital Divide: Access and Use of Technology in Education. *Journal of Social Sciences Review*, 3(2), 883-895.

Ahmad, U. M. & Ahmad S. A. (2023). Information and Communication Technology and the Covid-19 Global Pandemic Era: The Realities in the Nigerian University Education System, *International Council for Education, Research and Training (ICERT),*1-12

Akintoye, O. T. (2021) Effect of Information Communication and Technology Services on the Private Sector Practices: Evidence from the Nigerian Manufacturing, Trade and Financial Sectors; *Bingham International Journal of Accounting and Finance*: 2 (2); 160-172.

Akujor, C.E., Dozie, I.N.S. Onwuliri, C. O.E., Oluwasogo A. O., Ugwoke, G.E.. Alozie, G. A. & Mejeha, I.M. (2019). Information and Communication Technology (ICT) As a Tool for the Achievement of Millennium Development Goals in Nigeria; Advances in Science and Technology; 3 (2); 138 – 145.

Amitendu P. (2023). India and China: Close Rivals in the G20 and in the Global South. https://www.policycenter.ma/sites/default/files/2023-12/Annual%20Trends%20Report%202023-ISPI-ORF-PCNS_final.pdf

Arslan, S. (2022). Digital divide vs. inclusive thinking: The educational television in Turkey. In J. K. H. Pun, S. Curle, & D. Yuksel (Eds.), The use of technology in English medium education (pp. 91–108).

Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to Coronavirus pandemic. *Asian Journal of Distance Education*, 15(1), 1-6.

Bucea, A.E., Cruz-Jesus, F., Oliveira, T., & Coelho, P. S. (2020). Assessing the Role of Age, Education, Gender and Income on the Digital Divide: Evidence for the European Union. *Information Systems Frontiers*, 1–15.

Cai, Y., & Niu, X., (2021). Scale measurement and structure analysis of China's digital economy Added Value. *J. Social Sciences in China* (11), 4–30.

Huang, S., Ye, W., and Han, F., (2023). Does the digital economy promote industrial collaboration and agglomeration? Evidence from 286 cities in China. *J. Sustainability* 15 (19). https://doi.org/10.3390/su151914545.

Karim E., Paolo M. & Samir S. (2023). The Rise of Global South: New Consensus Wanted, chromeextension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.policycenter.ma/sites/default/files/2023-12/Annual%20Trends%20Report%202023-ISPI-ORF-PCNS_final.pdf

Li, X., Liu, J., & Ni, P., (2021). The impact of the digital economy on CO2 emissions: a theoretical and empirical analysis. *J. Sustainability* 13, 67–72.

Liu, J., Li, B., & Meng, Q., (2023). Digital economy and high-quality economic development in the western region-theoretical logic and practical path. *J. Technical Economy and Management Research* 320 (3), 14–20.

Marianna A. & Akram Z. (2023). Moving Beyond "Geometric Thinking": Africa and the Global South, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.policycenter.ma/sites/default/files/2023-12/Annual%20Trends%20Report%202023-ISPI-ORF-PCNS_final.pdf

Mesfin M., Wondwossen J., & Mubarek, O. (2024). The effect of financial technology on financial inclusion in Ethiopia during the digital economy era, Cogent Social Sciences, 10(1); 2309000.

Mokaddem, S. H. (2023). BRICS' Expansion and Its Global Security Implications, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.policycenter.ma/sites/default/files/2023-12/Annual%20Trends%20Report%202023-ISPI-ORF-PCNS_final.pdf

Nwakoby, N. P., Okoye, N. J. & Chukwurah, D. C. (2021). Appraisal of communication technology and its" administrative efficiency bomb sighting Anambra state ministry of information and public enlightenment (2010- 2019); *International Journal of Academic Accounting, Finance & Management Research*; 5 (3); 54-75.

Obeng, A. Y. Opoku, S. K. Obeng, A. O. & Afriyie, E. O. (2024). Complementary effects of information systems strategic assets and enabling roles of information systems on innovation performance of banking organizations, Wiley, https://doi.org/10.1002/isd2.12322.

Opunne T. A. & Pritta M. E. (2023). Knowledge Economy: The Way Forward for a Dwindling Economy and Its Sustainability in Nigeria, Approaches in International Journal of Research Development, 14 (1), 1-12.

Sezgin, S., & Fırat, M. (2024). Exploring the Digital Divide in Open Education: A Comparative Analysis of Undergraduate Students. *The International Review of Research in Open and Distributed Learning*, *25*(1), 109–126.

Shivam, S. (2023). Regional Organizations in the Global South - Straddling Between Competition or Cooperation. https://www.policycenter.ma/sites/default/files/2023-12/Annual%20Trends%20Report%202023-ISPI-ORF-PCNS_final.pdf

Teryima, S. J. & Ayegba, S. (2019). The role of information communication technology (ICT) in enhancing productivity in local government administration in Benue State, Nigeria; *International Journal of Business and Economic Development;* 3 (1);15-21.

Vassilakopoulou, P. & Eli, H. (2023). Bridging Digital Divides: A Literature Review and Research Agenda for Information Systems Research. *Information Systems Frontiers*, 25,955–969.

World Economic Forum Report (2023) Digital Transition Framework: An action plan for public-private collaboration White Paper January 2023. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www3.weforum.org/docs/WEF_Digital_Transition_Framework_2023.pdf

Xiaoya, M., Xiaying, F., Dandan, F., Jin, T., & Ming J. (2024). How does the digital economy impact sustainable development? An empirical study from China, *Journal of Cleaner Production* 434, 140079.

Xu, Y., Pan, Y., & Shi, Y., (2023). Digital inclusive finance, marketization level and sustainable economic development - evidence from 217 prefecture-level cities in China. *Journal of Financial Development Research,* 493 (1), 47–56.