



CHALLENGES, OPPORTUNITIES AND REMEDIES OF BUSINESS AND ECONOMICS IN THE DIGITAL ERA: AN OVERVIEW

Management

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ABSTRACT

This notion of this article is to explore the challenges, opportunities and suggest amicable solutions as remedies to overcome the challenges by applying the prevailing opportunities in the field of business and economics in the digital era. Accordingly, certain challenges of the digital era are incorporated which include: Automation, Blockchain Technologies, Change Management, COVID-19 Pandemic Era, New Skill, e-commerce, Expansion of Industries, Security Threats, Digital Age, Information and Communication infrastructure, Infrastructural Challenges, Focus on the Environment, Labor and Social Relations, Lack of Clear and Defined Rules, National Data Regulations, Security and Privacy, Skills Challenges, Tax Regulation, Technology and Jobs Scare, and Trade Facilitations. Besides the challenges, opportunities to make use of the digital era particularly in business and economics are also taken in the study and they are: Blockchain Technology, Communication Services, Digital Transformation, Digitalization, Digitalization and Gender Equality, Domestic Resource Mobilization, e-commerce, e-commerce Development, Growth Creative Sector, Increased Internet Usage, Innovation, Digital Technologies, Internet Technologies, Labour-intensive Sectors, Marketing and Sales, Online Marketing, Production Processes, Reduction in Trade Costs, Technology Transformation and Technology and Public Service Provision. In order to overcome the challenges and make use of the opportunities, the following amicable and remarkable solutions are suggested and they are: Attention to Policymakers, Specific Strategies and Innovative Policies, Financial Assistance, High Skilled Labour Force, Improving Trade Logistics, Innovation Capacity, Responsible Role Makers, Role of Government, Role of International Community and The National e-strategy.

KEYWORDS

Digital Era, Challenges, Opportunities, Remedies

I. INTRODUCTION:

The advent of the 4th industrial revolution promises significant social and economic opportunities and challenges which demand that governments respond appropriately in supporting the transformation of the society (More and Soumaya, 2019). The digital era is a new reality, and it is driving economic growth and development. It poses both challenges and opportunities on all levels. It offers an opportunity for developing countries to better participate in international trade (Maarten, 2021).

In the last thirty years, technological advancements in information and communications technology (ICT), by supporting the development of digital markets and platforms, have significantly impacted the way in which goods, services and information are bought, sold and exchanged. More cross-border trade is now digital in nature – a trend that is likely to continue in the future (Eddy Bekkers, et al., 2021). The amount of cross-border bandwidth used increased by 148 times between 2005 and 2017 (McKinsey Global Institute, 2019).

A World Trade Organization (2020) report on the impact of COVID-19 points out that: The crisis is focusing greater attention on online supply in sectors such as retail, health, education, telecommunications and audio-visual services, accelerating companies' efforts to expand online operations, and creating new consumer behaviours that are likely to contribute to a profound and long-term shift towards online services.

II. Challenges of Business and Economics in the Digital Era.:

1. Automation with CNC-controlled Machinery: In CNC (Computer Numerical Control) the automation of machine tools by means of computers executing pre-programmed sequences of machine control commands. This is in contrast to machines that are manually controlled by hand wheels or levers, or mechanically automated by cams alone (Janet Johansson, 2017b).

2. Blockchain Technologies: In the next couple of years, Blockchain technologies will consolidate and be applied to different and innovative uses increasing transparency and decentralization of information. The expansion of internet of things will create zillions of data sources capable of measuring and combining physical and digital data to create and expand products and services, such as Biometrics authentication (Antonio Moneo, 2017).

3. Change Management People in the Centre: In change management, organizational factors such as the level of professionalization, the history of the organization, organizational hierarchy, the age of the workforce and the organization are all critical for the outcome of change. The 'ageing' workforce and the workforce with a lower professional level are normally less flexible, less reactive

to technological renewal and tend to respond to change negatively (Furnham, 2005).

4. COVID-19 the Pandemic Era: The human tragedy of the pandemic, with more than half a million deaths worldwide so far, has imposed additional challenges. Mandated restrictions on activity have helped to prevent even greater loss of life, but have also resulted in lost livelihoods and incomes, forced absence from classrooms, foregone vaccinations against other infectious diseases, stresses on mental health, and, for women in particular, a disproportionate increase in the burden of care work as well as greater risk of domestic violence (Liu Zhenmin, 2020).

5. Demand for New Skill: Some of the employees are required to acquire new knowledge and skills (in IT and programming) in order to cope with technology renewal both in automation and in digitalization (Janet Johansson, 2017a).

6. e-commerce Regulation: e-commerce is growing rapidly in Argentina and Brazil, and in both countries the share of the population participating in e-commerce transactions exceeds the Latin American average. Both countries have established a legal framework for data protection, regulation of the internet, consumer protection, taxation of e-commerce, and contracts and e-signatures. (Vera and Valentina, 2021).

7. Expansion of Industries: In recent years, the manufacturing industry has been facing challenges such as constant need to expand into new markets and geographies, to capitalize on technology to affordably adapt new processes, to implement faster and more efficient ways of sharing fulfilment information, and also to demonstrate compliance capabilities to win new business. (Janet Johansson 2017c).

8. Global Security Threats: New global threats will continue to expand and transform the economy. The sharing economy will find a better legal framework and continue to advance. Massive hacking will force countries and companies to heavily invest in security and political systems will suffer recurring crisis derived from the persistent security crisis (Antonio Moneo, 2017).

9. Inequality in the Digital Age: The problem of inequality, which is mainly associated with employment and social status and mobility, is not new, but in recent years it appears to have become more acute. Some people prefer to talk about a lack of inclusiveness rather than inequality, as a country can simultaneously display a lack of inclusiveness and a low level of inequality (Draper, Dorffel and Freytag, 2019).

10. Information and Communication infrastructure and Emerging Technologies: Technologies such as cloud computing, the internet of things (development of smart products), the internet of services (smart mobility and smart logistics) and internet of energy (efficient use of natural resources) has assumed an important role (Lom, Pribyl & Svitek, 2016). Telecommunication technologies and infrastructure such as broadband and other internet technologies provide digital connectivity for effective communication, collaboration and integration of people, systems and machines (European Commission, 2015).

11. Infrastructural Challenges: In South Africa, poor broadband penetration was found to be one of the barriers hindering transformation to the so-called smart society driven by digital connectivity, advanced technology, skills, knowledge, and innovation to institute economic and social development (Manda & Backhouse, 2016).

12. Insufficient Focus on the Environment: Insufficient focus on the environment in the pursuit of economic and social development, despite the substantial linkages between natural resources and socioeconomic and geopolitical processes at different levels (Izabella, et al., 2020).

13. Labor and Social Relations: During the quarantine period, people had to adapt to a teleworking model and learn to share a reduced space with their relatives. Home residences become hybrid places where domestic tasks and office work are shared. This scenario has a large impact on people's lives, with the risk of having their income reduced or losing their jobs (Fernando, et al., 2020).

14. Lack of Clear and Defined Rules: Recent technological advances have supported an increase in digital trade, this growth has occurred with a lack of clear and defined rules (Dorotea, 2021). As Wolfe (2018) indicates, "the digital trade story is about how states are learning to solve the problems of state responsibility for something that does not respect their borders while still allowing 21st century commerce to develop".

15. National Data Regulations: National regulations given the growing importance of data in business and trade, more and more firms are trying to gather as much data as possible in this new gold rush. (OECD, 2017). Data is increasingly being concentrated into the hands of a few e-commerce giants such as Amazon, Facebook and Google. Such concentration of power leads to concerns over potential abuse, which in turn heightens the need to regulate the flow and transfer of data, both within and across national borders (Henry, 2021).

16. Security and Privacy: The increased use of data analytics is likely going to bring new challenges when it comes to issues of data privacy and protection ((Michael and Michael, 2016 & More and Soumaya, 2019). Moreover, privacy and security concerns in technology bring with it trust issues in the "smart" era (Manda & Backhouse, 2016 & More and Soumaya, 2019).

17. Skills Challenges: Skills, innovation systems, and knowledge communities provide the much-needed intellectual guidance in the development and implementation of smart and digital initiatives (Abdoulleev, 2011; Scholl & Scholl, 2014 & More and Soumaya, 2019). Moreover, the e-readiness (e-literacy and e-skills) influence the citizens' ability to fully participate in social and economic activities in the smart society (Manda & Backhouse, 2016 & More and Soumaya, 2019).

18. Tax Regulation: Issues of tax regulation on international e-trade transactions became relevant immediately following the emergence of the virtual component of international trade at the turn of the 21st century. Taxation should also adapt to such e-commerce operations by properly regulating related transactions with tangible goods and digital items, including e-services and virtual content (Alexander and Sergei, 2021).

19. Technology and Jobs Scare: There is a general sense that slow/stagnant employment generation—and even job loss—along with growing wage differentials could be blamed on production technologies that reduced the demand for less-skilled workers in particular. The fear is that human labour will be increasingly displaced by machines, and there will simply not be enough work to provide employment to all the people who need it (Autor and Dorn, 2013).

20. Trade Facilitations: When e-commerce crosses countries' borders, trade facilitation becomes one of the most critical issues to global consumers, because the status of trade facilitation implementation in each country significantly affects the cost of trade. Trade costs are still high despite the reduction in trade barriers and improvement of communication brought by the digital technology (Taleb, et al., 2021).

III. Opportunities of Business and Economics in the Digital Era.:

1. Blockchain Technology: It is a kind of electronic bookkeeping that structures data, encrypts it and stores it on a network. Unlike traditional databases that are administered and controlled by a centralized entity, blockchain technology is based on a peer-to-peer network and is administered in a decentralized manner (Ganne, 2018).

2. Communication Services: Improved communication services enable not just more interaction, but also much cheaper and more efficient transmission of crucial information that can benefit producers, distributors and consumers, and, of course, citizens more generally (Jayati, 2020).

3. Digital Transformation: Digital transformation processes depend on the workforce and the means at their disposal. Technology plays a key role in the digital transition. There is panoply of emerging technologies that have already contributed to the digital transformation of many companies and industries (Fernando, et al., 2020).

4. Digitalization (Industry 4.0) with a Digitalized Management Tool: It is the adoption and implementation of digital technologies into a business, home or organization. This adoption and implementation allow businesses or companies to optimize your automated processes and utilize digitization (Janet Johansson 2017b).

5. Digitalization and Gender Equality: Automation and digitalization have largely eliminated much of the hindrance and obstacles that previously prevented women from taking on jobs in different places in the metal working and manufacturing industry. There is one stream of thought that believes that digital technology is a means to eventually democratizing production and enabling bodily transcendence, and liberating mankind from gender inequality (Janet Johansson 2017c).

6. Domestic Resource Mobilization: Achieving sustainable financing would demand African policymakers to give the "driver's seat" to domestic resource mobilization rather than equating development with the business of poverty management and relying on external financing for poverty reduction (Cristina Duarte, 2020).

7. e-commerce (digital trade): Government institutions increasingly use the internet, including through e-mail and instant messaging, for receiving feedback from the public, providing public services, collecting data, conducting research, training staff, purchasing or ordering goods and services, advertising, performing banking and other financial services, making phone, tracking goods and services, and recruiting internal and external employment candidates (Tabitha Kiriti Nganga and Mary Mbithi, 2021).

8. e-commerce Development: China's e-commerce transactions increased from only US\$ 1.16 trillion (CNY 8 trillion) in 2012 to US\$ 4.58 trillion (CNY 31.63 trillion) in 2018. In 2018, the transaction scale of China's online retail sales reached US\$ 1.3 trillion (CNY 9 trillion), accounting for 28.5 per cent of the market (China E-commerce Development Report 2018–2019).

9. Growth Creative Sector: Digital content is replacing physical goods in the sector, for example, in music, books and gaming. Digital aggregators like Amazon, Apple, Netflix, Spotify, TikTok and YouTube have fuelled rapid growth and diversified earnings towards streaming, ad-supported income and data monetization (Keith, 2021).

10. Increased Internet Usage: Since the early 2000s, Mauritius, a small island in the Indian Ocean has taken up the challenge of trying to transform itself into a cyber-island, given that at that time, only 6.8 per cent of the population was using the internet (Hamuth, 2017). According to the latest Internet World Stats Data (2019), 63.2 per cent of the population in Mauritius were internet users as of 31 December 2019, an increase in usage of over 899 per cent since 2000.

11. Innovation: The 4th industrial revolution will demand the production of innovative products, business models and production techniques driven by technology. Research and development would thus become increasingly important as a driver of innovation in the 4th industrial revolution (More and Soumaya,2019).

12. Digital Technologies: Eddy Bekkers, et al., (2021) provide an empirical illustration of the potential gains in trade, both globally and for developing countries, from the adoption of robots, greater reliance on artificial intelligence and big datasets, more intensive use of information and communications technology (ICT) services by other sectors of the economy, and the reduction in trade costs because of new digital technologies.

13. Internet Technologies in Global Value Chains: The internet is likely to play an increasingly important role in reducing the time and costs required to trade. Digital platforms and logistics technologies (among others) could reduce search costs by facilitating matching between buyers and sellers, and the use of robotics, artificial intelligence and Internet of Things (IoT) applications could substantially reduce shipping and customs processing time (Guedidi, et al., 2021).

14. Labour-intensive Sectors: Given that developing countries are typically characterized by an abundance of labour and therefore have comparative advantages in labour-intensive sectors, promoting industries and adopting technologies that are in line with a country's comparative advantage would lead to creation of more job opportunities, rising wages, particularly for lower-wage workers, and improvement in economic equality (Justin Yifu Lin and Peilin Liu,2020).

15. Marketing and Sales: The digital technologies and the change they have brought to the daily lives of businesses have created new economic opportunities. They opened new markets for new types of products and have transformed entire industries, dematerializing the products that had been commercialized (Rachinge,2019).

16. Online Marketing: Online marketing, which is also called internet marketing, involves use of interactive, virtual spaces for the sake of promoting and selling goods and services. Being cost-effective, flexible, and fast and enjoying an on unprecedented global reach, internet marketing has brought about different businesses incredible gains (Soheila, 2014).

17. Production Processes: Production processes keep getting more efficient and result in newer and more affordable products can open up possibilities for more equitable access to such products, especially among the poor in developing countries (Jayati,2020).

18. Reduction in Trade Costs from digitalization and e-commerce: New technologies are expected to lead to a reduction of trade costs by improving efficiency in such areas as trade finance, logistics, and custom procedures and risk management (McDaniel and Norberg, 2019).

19. Technology Transformation: new technologies are crucially needed to cope with some of the most existential problems of our time, such as climate change and environmental destruction, by promoting green energy sources and seeking cleaner and less extractive ways to produce and deliver goods and services (Jayati,2020).

20. Technology, Public Service Provision: There is no question that new technologies have a profound impact on services provision; in fact, the entire spectrum of services could be impacted. As noted above, these technologies can reduce costs; increase the effectiveness of and widen access to a range of services, including in health and education; and determine eligibility criteria for particular schemes and incentives, which makes them particularly attractive to Governments (Jayati,2020).

IV. Remedies (Amicable and Remarkable Solutions):

1. Attention to Policymakers: The areas requiring special attention by policymakers in developing countries include: (i) the problem of data inadequacy; (ii) uneven and costly digital connectivity; and (iii) education systems that are not preparing entrepreneurs for in-demand jobs or for the workplace of the future. (Ali, et al., 2021).

2. Specific Strategies and Innovative Policies: The 4th industrial

revolution should be positioned as a strategy that responds to the government's priorities that addresses some of the societal challenges through social innovation (More and Soumaya,2019).

3. Financial Assistance: Cristina Duarte (2020) emphasizing that sustainable financing is a prerequisite for sustainable development.

4. High Skilled Labour Force: Transformation is high on the South African government agenda, and an un-transformed labor force stands in the way for the 4th industrial revolution. The projected job losses in the lower skills categories in the 4th industrial revolution is likely to affect the already disadvantaged low skilled workers more (More and Soumaya,2019).

5. Improving Trade Logistics: Improving the efficiency of trade logistics is a key element to reducing trade costs and promoting global and regional trade (Taleb, et al., 2021).

6. Innovation Capacity: Innovation research, and development capacity is critical in achieving the government's vision of stimulating growth in the economy through advanced manufacturing and beneficiation of mineral resources (Department of Trade & Industry, 2016).

7. Responsible Role Makers: The successful adoption of the 4th industrial revolution will rely on the ability of governments, business and citizens to commit in supporting the transformation of society into a modern and smart society driven by advanced technology, skills, innovation and responsive policy (More and Soumaya,2019).

8. Role of Government: The government can take steps to support production and processing supply chains, find and cultivate modern online businesses and assist with operation and marketing links. The government should provide policy and legal guarantees for the development of e-commerce and help solve data security and related problems (Yue et al. (2021).

9. Role of International Community: José, (2020). recommends actions that the international community can take in areas such as trade, finance and tax cooperation to put the global economy on a more sustainable path.

10. The National e-strategy: According to the National E-strategy, "in line with the 4th Industrial Revolution, there is a need for South Africa as a country to develop a comprehensive framework and action plans to deal with the opportunities while mitigating the risks of the transition to the Digital Industrial Revolution" (South Africa, 2017:17).

V. CONCLUSION:

In the digital era, information technology is vital and inevitable. Accordingly, let us make use of information technology which especially plays a prime role in the industry 4 revolution. Let us realise the importance of information technology and its application particularly in education, trade, health and even in our daily routine work and enjoy the world of information technology!

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