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## Taking Advantage of Digitalization in Economy and Innovation to Transform Modern Society

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#### **Abstract**

Digital economies are those that make use of the latest technology to digitize processes and drive business growth through the use of digital tools. A result of this is an increase in foreign direct investment, which, in turn, creates new jobs and opportunities within the economy and society as a whole. There is a fundamental change taking place in the economy and in our society as a result of the digitalization of the economy. Consequently, it promotes entrepreneurship, productivity, and economic growth on a regional level, thus contributing to the development of the economy. As well as having implications for the growth of the economy, the labor market, and political participation, there are also implications for the growth of the economy. As a result, it puts new demands on the field of education and training across a wide range of areas, not just those related to information and communication technologies (ICTs). There will be a future in which one of the most important issues relating to productivity, employment, and competitiveness in various industries and within different companies, as well as how rapidly digitalization will penetrate their respective economies and societies, will prove to be of utmost importance in the coming years. In the perspective of education economics, one of the most important factors in the success of a system for educating and training people is their ability to adapt to the changing world of work.

**Keywords:** digitalization, innovation, modern society, information and communication technologies, digital economy, brick-and-mortar economy, world wide web, blockchain technology, globalization

#### Introduction

Digital economy, which is an umbrella term of the words digital computing and economy, describes the transformation of traditional brick-and-mortar economic activities such as production, distribution, and trade that has been caused by the Internet, the World Wide Web, and blockchain technologies. The term is used by economists and economists to describe the impact of these technologies on traditional brick-and-mortar economic activities. The digital economy can be defined as a set of activities that make use of information technology to create, modify, market, or consume goods and services as a result of information technology, and there is no doubt that this is what the digital economy is referring to. Throughout the past few years, a number of new digital innovations have emerged, including digital banking, e-commerce,

virtual education, smartphone apps, and collaboration tools that have revolutionized the world. It is important to realize that the digital economy encompasses a wide range of economic activities that use digitized information and knowledge in order to produce goods and services. With the advent of the internet, cloud computing, big data, fintech, and other new digital technologies, information can now be collected, stored, analyzed, shared, and stored digitally, and social interactions can now be transformed substantially. As digital technologies drive innovation and fuel job opportunities, the digitization of the economy creates benefits and efficiencies that are beneficial to both the economy and society. Moreover, the digital economy permeates all aspects of society and is influencing the way in which people interact with each other as well as bringing about a broad change in the way in which society functions.

There is no doubt that the digital transformation has been beneficial to the world as a whole, but even so, understanding the digital economy remains a challenge because of its complexity. This concept of digital transformation is not only about the use of big data and digital platforms, but also how these advanced technologies can be utilized to maximize opportunities for innovation, the development of new business models and processes, as well as the development of smart products. Furthermore, the digital economy provides regional businesses with an opportunity to expand from local markets into the global marketplace, which is in line with the long-term trends towards market liberalization and reduced trade barriers that are being driven by the digital economy. The digital economy is referred to by a number of different names, including the Internet Economy, Web Economy, Cryptoeconomy, and New Economy. In addition, there are a number of other terms. The digital economy is undoubtedly replacing and expanding the traditional economy in a continuous and seamless manner. There are no clear lines between the two types of economies that are integrated, which is why there is no clear line of demarcation between them. With the advent of the Internet, World Wide Web, and blockchain technologies, billions of transactions are now being conducted online every day, between individuals, organizations (businesses, educational institutions, non-profits), and distributed computing devices (servers, laptops, smartphones, etc.) enabling the digital economy to thrive. As the internet has been fast evolving into the Internet of Things (IoT) over the past few years, the digital economy would have been unable to exist as it does today if it wasn't for the Internet of Things.

### **Economic Impact**

According to the Economist, as of 2010 the Digital Economy was estimated to be worth approximately three trillion dollars. This represents 30% of the S&P 500 index, which is six times the U.S.'s annual trade deficit, which is more than the United Kingdom's GDP. It is widely acknowledged that this new economy is having a significant impact on the whole economy as a result of its rapid growth. Attempts have been made in the past to categorize the size of the impact that these changes are having on traditional sectors as a result of these changes, but there has not been much success. According to the Boston Consulting Group, there are four waves of change that are sweeping over the consumer goods and retail industries at the present time. According to Deloitte's 2012 report, there are six industries that have a "short fuse" as a

result of the digital economy, and will experience a "big bang" in the near future, due to a "big bang" caused by the digital economy. Telstra, an Australian telecommunications provider, explains how the digital economy is likely to lead to the globalization of the competition as well as the intensification of the intensity of the competition as a result of its effect on the digital economy.

It has been estimated that the Digital Economy represented \$11.5 trillion on average in 2016, which is 15.5% of global GDP, 18.4% of the GDP of developed economies, and 10% of the GDP of developing economies. This study finds that the digital economy has almost doubled in size over the past 15 years, and the digital economy has almost doubled in size since 2000, which is an enormous increase in comparison to the size of the digital economy in 2000. According to the study, the digital economy has grown by 2 1/2 times over the past 15 years. Among the countries that were able to produce the majority of the value in the digital economy, the United States (35% of the value), China (13% of the value), and Japan (8% of the value) were the three main countries. This means that Iceland, Liechtenstein, and Norway along with the majority of the EU's GDP are responsible for another quarter of the EU's GDP, as a result of these factors.

#### **Current Scenario**

During the last decade of the 20th century, Nicholas Negroponte (1995) used the metaphor of the shift from processing atoms to processing bits to explain the problem: "The problem is simple". To deliver information in an age when information is embodied in atoms, a large corporation and a vast array of industrial-age means are essential in order for it to be delivered. The good thing is that when the focus shifts from bits to bits, you can suddenly do your own publishing on the Internet and no longer need the traditional big guys.

As the digital skills gap in the global economy widens, and there are differences in the levels of regulations and infrastructure across countries, not all countries are able to take full advantage of the benefits offered by the digital economy. It is not uncommon for people in developing global countries to lack access to basic online accounts due to a lack of digital devices, the inability to acquire national forms of identification, or to socioeconomic barriers, such as the lack of digital devices. I think there is a need to develop a deeper understanding of the differences between the populations of different countries when it comes to access and adoption to the digital economy in order to create more inclusion in it. There are also new issues that need to be addressed as the global digital transformation intensifies, such as issues relating to trust, privacy, and transparency. There is no doubt that the digital economy has the potential to profoundly affect the social environment and economic activities of countries around the world. Currently, the industry is undergoing high growth, rapid innovation, and broad application to many other economic sectors at the same time. In spite of the vast opportunities presented by the digital economy, global countries haven't yet fully realized the potential of harnessing digital technology to achieve sustainable development, due to the fact that (among

other things) many of the population of Asia is prevented from engaging in the digital economy due to poor ICT infrastructure, inadequate skills development, and socioeconomic barriers.

## **Opportunities**

Almost everyone is aware of the fact that the digital economy is backed by the dissemination of information and communication technologies (ICTs) across all sectors of the economy to enhance its productivity and efficiency. Due to the digital transformation of the economy, conventional notions about how businesses are structured, how consumers obtain goods and services, and how states must adapt to changing regulatory challenges are being altered as a consequence of the digital revolution. As well as the digital economy, the future of work is also contributing to the digital economy, especially when it comes to the COVID-19 outbreak in the wake of this year's outbreak. In conjunction with the increase in online activity that contributes to the growth of the global economy, companies that support the systems that make up the Internet are more profitable than ever before as a result of the increase in online activity.

- As part of our commitment, we are committed to developing a better understanding of the role that the digital economy plays on a global basis, as well as how digital technologies are playing an increasingly important role in the global economy and transforming not only business practices, but also societies in a multitude of ways.
- As part of this study, the purpose is to examine how institutions, policies and regulations, and human skills may be transformed in order to keep up with the rapid pace of digital transformation in global markets in order to remain competitive.
- It is our intention to discuss the current state of the digital economy in general, as well as a number of other topics related to digital flows, e-commerce, financial technology, the role of education, skills, and innovation in the digital economy, and how the digital transformation affects global economics.

#### **Conclusion**

A study of the economics of digitization can be defined as the study that seeks to analyze how digitalisation, digitization, and digital transformation affect the way in which markets are affected by these changes in the field of economics. Additionally, it refers to the methods by which digital data can be analyzed in order to study economics in a more systematic manner. By using technology in order to store, share, and analyze data, the costs associated with storing, sharing, and analyzing data are being reduced as a result of digitization. As a result, consumers' behavior has changed, as have the ways in which industrial activity is organized, and the manner in which governments function as well. I believe that there are two main reasons for the existence of the field of the economics of digitization within the field of economics as a distinct subfield. There is no doubt that there will be a need for new economic models as we move forward into a digitized world, where many of the traditional assumptions about information will no longer be valid. There is also a need to take into account

the fact that new types of data generated by digitization will require new methods of analysis in order to be properly analyzed.

Several fields of economics are involved in research into the economics of digitization, including industrial organization, labor economics, and intellectual property. As a result, many of the contributions that have been made to the economics of digitization have also found their intellectual home within these disciplines. It has been a common theme in much of the research in this field that existing government regulations of copyright, security, and antitrust are not appropriate in the modern world due to differences in technology and business models. There is now no marginal cost associated with creating and sharing information goods, such as articles of news and movies, for example. It has become common practice to distribute information goods without permission as a result of this and has increased competition between providers of information goods as a result. There is a growing body of research in the economics of digitization that studies how policy should be adapted as a response to these changes.

#### References

Annenkova, Victoria, et al. "Innovative technologies and methods of teaching on the principles of digitalization." International Journal of Civil Engineering and Technology. 2019; 10 (2): 1979 (1987).

Ayres, Robert U., and Eric Williams. "The digital economy: Where do we stand?." *Technological Forecasting and Social Change* 71.4 (2004): 315-339.

Baisya, Rajat K., and Siddhartha Paul Tiwari. "E-governance Challenges and Strategies for Better-managed Projects." Emerging Technologies in E-Government (2008): 203-208.

Borremans, Alexandra D., Irina M. Zaychenko, and Oksana Yu Iliashenko. "Digital economy. IT strategy of the company development." *MATEC Web of Conferences*. Vol. 170. EDP Sciences, 2018.

Brynjolfsson, Erik, and Brian Kahin, eds. *Understanding the digital economy: data, tools, and research*. MIT press, 2002.

Bulturbayevich, Mullabayev Baxtiyarjon, and Mahmudov Baxriddin Jurayevich. "The impact of the digital economy on economic growth." *International Journal of Business, Law, and Education* 1.1 (2020): 4-7.

Bukht, Rumana, and Richard Heeks. "Defining, conceptualising and measuring the digital economy." *Development Informatics working paper* 68 (2017).

Carlsson, Bo. "The Digital Economy: what is new and what is not?." *Structural change and economic dynamics* 15.3 (2004): 245-264.

Forrester, Jay W. "Innovation and the economic long wave." Planning Review 8.6 (1980): 6-15.

Freeman, Chirstopher. "The economics of innovation." IEE Proceedings A (Physical Science, Measurement and Instrumentation, Management and Education, Reviews) 132.4 (1985): 213-221.

Haltiwanger, John, and Ron S. Jarmin. "Measuring the digital economy." *Understanding the Digital Economy: Data, Tools and Research* (2000): 13-33.

Kobilov, Alisher Urinovich, et al. "Modern content and concept of digital economy." *International Journal of Multicultural and Multireligious Understanding* 9.2 (2022): 375-378.

Lane, Neal. "Advancing the digital economy into the 21st century." *Information Systems Frontiers* 1.3 (1999): 317-320.

Li, Kai, et al. "How should we understand the digital economy in Asia? Critical assessment and research agenda." *Electronic commerce research and applications* 44 (2020): 101004.

Mesenbourg, Thomas L. "Measuring the digital economy." US Bureau of the Census 1 (2001): 1-19.

Perez, Carlota. "Microelectronics, long waves and world structural change: New perspectives for developing countries." World development 13.3 (1985): 441-463.

Rosenberg, Nathan, and Ralph Landau, eds. The Positive sum strategy: harnessing technology for economic growth. National Academies Press, 1986.

Savina, T. N. "Digital economy as a new paradigm of development: challenges, opportunities and prospects." Finance and credit 24.3 (2018): 579-590.

Soete, Luc. "2 1 Catching up in technology: entry barriers and windows of opportunity." (1988).

Tayibnapis, Ahmad Zafrullah, Lucia Endang Wuryaningsih, and Radita Gora. "The development of digital economy in Indonesia." *IJMBS International Journal of Management and Business Studies* 8.3 (2018): 14-18.

Tiwari, Siddhartha Paul. "Information and communication technology initiatives for knowledge sharing in agriculture." arXiv preprint arXiv:2202.08649 (2022).

Tiwari, Siddhartha Paul. "Strengthening E-Commerce Product Launches-Improving Efficiencies from Development to Production." Project And Technology Management Foundation (A Non-Profit Organization) Member of Asia Pacific Federation of Project Management 1.2 (2015): 4-6.

Tiwari, Siddhartha Paul, and S. P. Tiwari. "Is export-oriented and currency dynamics-based Indian soybean revolution environment-friendly." Current Science 114.08 (2018): 1604-1605.

Tiwari, Siddhartha Paul, and Rajat K. Baisya. "E-governance and its impact on enterprise competitiveness: Trends, Status and Challenges." MDI, Gurgaon INDIA in Association with Australian Centre for Asian Business, University of South Australia, Adelaide, AUSTRALIA 1 (2014).

Tiwari, Siddhartha Paul. "Business: Innovation & Survival, by a Googler." (2015).

Tiwari, Siddhartha Paul. "Exploring the Linkage between a Successful Digital Campaign and Gaming." Casual Connect, Asia Pacific, Singapore 1.1 (2014): 5-6.

Tiwari, Siddhartha Paul. "Diversity and its importance in today's corporate environment." (2015).

Tiwari, Siddhartha Paul. "Editorial: Project and Technology Management Foundation (PTMF) Newsletter (June, 2015)." (2015).

Tiwari, Siddhartha Paul. "Editorial: Project and Technology Management Foundation (PTMF) Newsletter (December, 2014)." (2014).

Tiwari, Siddhartha Paul. "Knowledge Sharing and Content Creator Best Practices Online." (2015): 5-12.

Tiwari, Siddhartha Paul. "Workshop on Digital Marketing: Credit Course, IIM, Indore." (2010): 1-24.

Tiwari, Siddhartha Paul. "External factors which shape and influence an organisation's operating environment." Syngenta Workshop on Social, economic, political, technological & environmental trends, Singapore. Vol. 1. 2016.

Wang, Chong, Nan Zhang, and Cong Wang. "Managing privacy in the digital economy." *Fundamental Research* 1.5 (2021): 543-551.

Williams, Luyanda Dube. "Concepts of Digital Economy and Industry 4.0 in Intelligent and information systems." *International Journal of Intelligent Networks* 2 (2021): 122-129.

Yu, Haiqing, et al. "Introduction: disability participation in the digital economy." *Information, Communication & Society* 22.4 (2019): 467-473.

Zhu, Zhichuan, et al. "Effects of the digital economy on carbon emissions: Evidence from China." *International Journal of Environmental Research and Public Health* 19.15 (2022): 9450.

Zhang, Lu, et al. "Digital economy, energy efficiency, and carbon emissions: Evidence from provincial panel data in China." *Science of The Total Environment* 852 (2022): 158403.