



INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) BRINGS SOCIAL AND ECONOMIC IMPLICATIONS IN A BORDERLESS WORLD

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Abstract

The advancement of information and communication technology has significant implications for the social and economic lives of people worldwide, including people in Indonesia. This advancement transcends national and regional boundaries and reaches all social institutions and the economic power of the society. Various forms of creativity and innovation emerge as answers to various problems that simultaneously surface along with advances in internet-based information and communication technology. This research used a literacy study method combined with various data from participatory and phenomenological approaches to affirm the problems found in addition to advances in internet-based information and communication technology. The advancement of information and communication technology has covered three levels of development, namely the hardware level, software level, and meaning system level. At the hardware level, information and communication technology has also expanded in various countries including Indonesia, where almost all private and government agencies utilize information and communication technology to increase the quantity and acceleration of information production. Besides that, at the software level, information and communication technology is used to improve product quality because it is closely related to how the technology is used. In every country, almost all areas of life strategically require a touch of information and communication technology. This can be seen in the various products of information and communication technology companies that produce everything from *e-mail*, *e-commerce*, *e-government*, *e-education*, *e-library*, *e-journal*, *e-medicine*, *e-laboratory*, *e-shopping*, *e-banking*, and all electronic-based information and communication systems. The application of information and communication technology brings social and economic implications for all citizens wherever they are into a condition that cannot be rejected by anyone or any nation, a *conditio sine qua non* of a movement of human civilization inhabiting this earth.

Keywords: Information Technology, Social Implications, Economy, Society, Network (Netizen)

INTRODUCTION

The rapid development of information and communication technology has affected the social fabric of society. A professor from the University of Zlina even used the term of technological determinism to describe the belief that technology is the main initiator of societal transformation. The impact of communication technology development can be seen in various aspects of life, from the way individuals communicate and interact with others to the way they access information and engage in social activities. In recent decades, the emergence of the internet has been one of the most influential innovations in human history. The rapid pace of development of internet-based technology forces people to be able to adapt as part of social life. Among the many impacts of technological development, the development of artificial intelligence systems is a finding that has a significant impact on global society (Kamelia, 2022).

The development of science and technology has brought about several changes in people's lives. People are required to be technologically literate which will play a role in the present and future life. As time goes by, people seem to be complacent with technological products that provide convenience in all areas of life. This makes people's physical activities less and less because they have been replaced by technological products as tools that make human work easier. One form of technological progress that greatly impacts human life today is technological progress in the field of Information and Communication or Information Communication and Technology (ICT) which is progressing very rapidly in countries in the world, both developed and developing countries. Indonesia is one of the nations involved in the advancement of information media and technology. The development of information and communication technology essentially aims to improve the welfare of society in building the civilization of a nation or the world. Facts show that information and communication technology has brought important changes in the development of civilization, especially the world economy (Yoga, 2019).

Technology is the development and application that aims to solve problems. Thus, technology is usually referred to as new inventions that are helpful. Information is the result of data processing for specific purposes and benefits. While communication is the process of

conveying information from the information provider to the information receiver. So information and communication are closely related. Information and Communication Technology (ICT) means that there are data processing inventions that produce information that can be disseminated quickly and has a longer storage period. Another definition of ICT is a diverse set of technological tools and resources used to communicate and create, disseminate, store, and receive or give information (Yusniah, 2022).

The Information and Communication Technology (ICT) revolution has changed the way we interact and communicate. ICT affects people's behavior patterns, such as the use of smartphones for internet access, social media, and other online activities. However, ICT users also need to be smarter in utilizing it because smart technology requires users to have good digital literacy (Rianto, 2020). The development of ICT has transcended geographical and time boundaries and continues to shape the way we interact and communicate in our daily lives. The presence of Information and Communication Technology (ICT) has created a transformation in social life as a whole. ICT enables communication without barriers of distance and time, changing the dynamics of relationships between individuals, the structure of work, ways of learning, and cultural expression. The positive impacts of ICT include accelerating communication, making access to information easier, and facilitating social interaction more quickly and easily (Eko Budiono, 2022).

The research problems consist of do information and communication technology have socio-economic implications and what are the implications of information and communication technology in the socio-economic field? This research aimed to know and implicate information and communication technology in the socio-economic field.

LITERATURE REVIEW

There are several researches that were relevant to this research, namely a study entitled Utilization and Impact of Using Information Technology in the Social Field researched by Brenky Jie, et al (2023). This technology had various impacts on the society. This impact can be positive

or negative. The positive impact of information technology was it could communicate remotely, search for information easily, and others. The negative impact of information technology was the easy spread of hoaxes which caused a domino effect to become a means of cybercrime. Although there were negative impacts, information technology users could prevent these impacts by using information technology following the intended use.

The second research was conducted by Salsafirah Ulya (2022) with the title *The Effect of Information and Communication Technology Development on Economic Growth in ASEAN*. This research aimed to determine whether the variables of investment, labor, internet users, or information and communication technology simultaneously affect growth in ASEAN member countries. The results showed that the investment variable, information technology, and communication or internet users had a positive effect on the economic growth of ASEAN member countries and the labor variable although it had a positive effect on economic growth had no significant effect.

The next research was entitled *The Role of Information and Communication Technology (ICT) in Economic Growth in DKI Jakarta Province*, which was researched by Cut Asiana Gemawaty (2024). The utilization of ICT had opened up new opportunities and had a positive impact in various aspects, namely innovation in business, development of start-up ecosystems, expansion of e-commerce, increased access to education, efficiency of public services, adequate connectivity, and increased mobility. Nonetheless, challenges such as cybersecurity, access gaps, and the role of the government that needed to be continuously strengthened also needed to be considered. Therefore, suggestions were directed at improving ICT infrastructure, provided support to start-ups, developed human resources in ICT, and ensured an active government role in creating policies that support the growth of this sector. Through a holistic approach, DKI Jakarta could maximize the potential of ICT to achieve sustainable, inclusive, and competitive economic growth at the national and international levels. Based on the previous research above, the researcher designed a research model that was relevant to information and communication technology and focused on two areas, namely social and economic.

RESEARCH METHODOLOGY

This research used the literacy study method. This method was applied to collect the data from various sources relevant to the research, such as books, journals, magazines, research reports, theses, theses, dissertations, and other data sources (Herliza, 2023). This method was one of the research methodologies that often used to develop theoretical and practical aspects (Suyanto, 2019). The aim was to obtain a theoretical basis and information relevant to the research so researchers can develop the theoretical and practical aspects of their research. This research is combined with various data from participatory approaches and phenomenology to provide affirmation of the problems found in addition to the advancement of internet-based information and communication technology. Participatory approaches are generally used to dialogue, obtain information, analyze, and mobilize. Meanwhile, phenomenology is to understand something beneficial to human life (Shun-Ping, 2020).

RESULT AND DISCUSSION

Changes in communication patterns caused by the use of social media and instant messaging apps have changed the way people communicate. This has brought efficiency in everyday communication. Social media enabled more effective communication and allowed people to connect anytime and anywhere. Changes in communication technology, such as smartphones and instant messaging apps had brought changes in the language such as abbreviations, jargon, hashtags, emoticons, and slang. Communication through social media allowed users to explore their language and expressions, increased cross-cultural understanding, and promoted language diversity in the world.

Online community formation referred to the process of forming groups or communities in cyberspace such as on social media, blogs, or online games. Several studies have discussed online communities, including definitions, characteristics, and interactions between individuals in cyberspace. Online communities were not only considered virtual but also recognized as real

online communities that have real existence. Interactions and activities that occurred in online communities, such as online games, can give birth to virtual communities. In addition, there is also research that discusses impression management in online communities, which highlights the platforms where interactions occur in online communities. (Pramana, 2022).

The development of information technology played a central role in the changes of modern society. The development of information technology, took place at an incredible pace, had become a dominant force that involved every aspect of our lives. From the advent of the internet to the implementation of artificial intelligence systems, this evolution had not only produced innovations but also shaped a new reality that change the way human work, communicate, and live. The advent of the internet initially laid the foundation for the global connectivity revolution. With the internet, individuals could connect with anyone, anywhere, opening the door to a seamless exchange of information. This transformation not only created new opportunities in interpersonal communication but also had a tremendous impact on the business world. Companies could access global markets more efficiently, enable faster economic growth and change the way business was done. Not only that, this development also brought the concept of flexible working that allowed people to work from anywhere. The culmination of this revolution lied in the implementation of Artificial Intelligence (AI) (Alisyahbana, 2023). This technology allowed machines to learn and made decisions, mimicking the capabilities of the human brain. Machines that could process data quickly and accurately produce tremendous efficiency. So the development of information technology had a significant impact on the society. One of the main results found was the ease of access to information.

The social change that occurred was the way individuals interact and participate in society as social beings. One of the main aspects of this transformation was the acceleration and globalization of communication that allowed individuals to connect seamlessly by geographical boundaries. Information technology, especially through the internet, had broken down time and space barriers in communication (Saputra, 2023). The process of transmitting information had become faster and more efficient, allowed the exchange of ideas, news, and views from different corners of the world. It not only connected individuals personally but also provided widespread access to global information, changed the way society accesses, and processed knowledge. Social

media, as a striking product of advances in information technology had a central role in shaping social dynamics. It allowed individuals to share their thoughts, images, and experiences quickly and instantly (Boestam, 2022).

In addition to the social implications, there were economic implications where the development of information technology also created new job opportunities. Professions in technology and digital fields such as software developers, data analysts, cyber security experts, and digital marketers were increasingly in demanded and offered promising career prospects. Technological developments also encouraged startups and innovations in various economic and business sectors. Companies were using information technology to improve operational efficiency, increase productivity, and create innovations. The use of technologies such as database management systems, data analysis, and digital communication enabled companies to make better decisions and adapt quickly to market changes. In the face of developments in information technology, people need to continue to develop digital literacy. Digital literacy included an understanding of the use of information technology, information security, and the ability to utilize technology productively. With good digital literacy, people can be wiser and more effective in utilizing information technology for personal and social interests (Faidlatul, 2021).

The evolutionary journey of information technology, started from the era of personal computers to the era where people interacted with the digital world. In the early phase of its development, computers were more monolithic, positioned to fulfill military and business purposes. Large and expensive machines became the symbol of information technology at that time, used for mathematical calculations and data management related to military operations and business needs. Over time, the development of information technology was not only limited to the military and business sectors but penetrated various layers of society and sectors. The emergence of the personal computer era became an important milestone in the evolution of information technology. Computers were no longer the monopoly of large companies or institutions but can be accessed by individuals in their homes (Wakil, et al., 2022).

This development not only increased individual participation in the digital world but also stimulated the development of software applications from word processing to computer games. The internet revolution then radically changed the paradigm. The internet became a global bridge

connecting the people of the world, enabling the rapid and global exchange of information. It is not just a communication tool but also changes the way people shop, work, and socialize. This has led businesses to see new opportunities to reach global markets, create an increasingly connected economic landscape. Moreover, information technology affected economic growth in the modern era. Constant innovation, especially in e-commerce, and *fintech* (financial technology), which was innovation in the financial services industry that utilized technology, and digital-based services had shaped the business landscape and created new opportunities that were previously unimaginable. However, amidst these successes, the economic impact of information technology also created challenges that must be addressed. The growth of e-commerce reflected the success of information technology in changing the way business was conducted. In addition, e-commerce platforms not only provided global market access for small and medium enterprises but also created a more personalized and efficient shopping experience for consumers. This not only improved business competitiveness but also overall economic growth. In the financial sector, the emergence of *fintech* (financial technology) has shaken up the traditional banking industry. Information technology-based financial services, such as digital payments, online lending, and *robo*-advisory investments have provided easy access to financial services without involving large physical infrastructure. This had not only increased financial inclusion but also significantly stimulated the growth of the financial sector. Digitally-driven services such as food delivery apps, ride-sharing, and online ordering platforms had created new ecosystems that leverage information technology to provide faster, more efficient, and more accessible services. This transformation created new jobs and stimulated economic activity in related sectors.

In information and communication technology, there was the term Internet of Things (IoT) which is a new paradigm that allowed communication between electronic devices and sensors via the internet to facilitate various activities in life. The concept of *IoT* involves the connection between electronic devices, sensors, and other objects to the internet that allows data exchange and communication between devices, namely hardware and software. Both supported each other where the hardware provided the operations required by the software (Nurbayanni, 2023). The advancement of information and communication technology had

covered three levels of development, namely the hardware level, software level, and meaning system level. At the hardware level, information and communication technology had expanded in various countries including Indonesia, where almost all private and government agencies utilized information and communication technology to increase the quantity and acceleration of information production. In addition, at the software level, information and communication technology was used to improve product quality because it was closely related to how the technology was used. In every country, almost all areas of life strategically required a touch of information and communication technology. This can be seen in various products from information and communication technology companies such as e-mail, e-commerce, e-government, e-education, e-library, e-journal, e-medicine, e-laboratory, e-shopping, e-banking, to all electronic-based information and communication systems.

CONCLUSION

Based on the results of the literacy study that has been conducted, it can be concluded that the development of information technology had become the main driver of profound changes in various walks of life. Technological transformation had brought significant changes in various aspects of social interaction. The use of social media, instant messaging applications, and other communication technologies had shaped new patterns of communication, accelerated the exchange of information, and created online communities. Technology could have the impact of allowing humans to do what was being done better, faster, and cheaper, technology allowed humans to do what cannot be done now, and technology changed human lifestyles. ICT has had a significant impact on various aspects of human life, included social life, by shaping patterns of social interaction, changed ways of communication, and affected the dynamics of relationships between individuals in society.

The rapid development of technology today brings many changes in human life. Human interaction is no exception. Technological advances have made communication easier. Even though we cannot meet in person, we can still establish communication. ICT can encourage

economic growth. The higher the development of a country's information technology, the higher the country's economic growth. There is a tendency country with rapid ICT growth to have rapid social and economic growth as well. So research can find out and identify the implications of information and communication technology in the social and economic fields.

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