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Review Article

The Role of E-Commerce in Industry 4.0 in Strengthening Economic Civics among UPI Students

Nikita Mandhan[1], Rupali Yewele[2]

[1,2]Department of Computer Science and Technology, G H Raisoni college of Engineering and Management, Jalgaon, India
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Corresponding Author:
Nikita Mandhan, Department of Computer Science and Technology, G H Raisoni college of Engineering and Management, Jalgaon, India
E-mail Id:
nikita.mandhan@raisoni.net
Orcid Id:
https://orcid.org/0009-0002-5890-8225
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A B S T R A C T

This research is driven by the advancements in the digital world, which have brought about significant changes in the economic system.The transformations in the economic aspect of life caused by the digital world offer various opportunities for citizens to enhance their economic citizenship.Developing economic civics is a crucial issue when it comes to utilizing technology in the context of Industry 4.0, especially with the rise of online markets, commonly known as e-commerce.The data indicates that Indonesia has seen substantial growth in the value of electronic commerce.Recognizing the great potential for business transactions through e-commerce, it is essential for every citizen to take advantage of these opportunities to improve their economic strength, particularly among young citizens such as students.Based on this context, the researcher decided to conduct this study to address the aforementioned issue.The purpose of this study is to examine how the citizenship economy can be strengthened in the Industry 4.0 era for UPI students through the use of e-commerce.This research employs a qualitative approach using a literature review method.The data collection methods included interviews, observations, document analysis, literature study, and field notes.The findings of this study are expected to help students develop their skills in effectively using e-commerce to strengthen the citizen economy and achieve prosperity, thereby contributing to the realization of national development goals.

Keywords: Economic Civics, E-commerce, Industry 4.0.

Introduction

Technological progress, particularly the development of the internet during the fourth industrial revolution, has introduced both challenges and opportunities.One significant opportunity brought about by this advancement is the rise of online buying and selling activities, commonly referred to as e-commerce.E-commerce involves the sale of goods and services to consumers through the use of the internet and the world wide web.

With the significant potential of e-commerce in business dealings, it is essential for every citizen to take advantage of it in order to develop economic responsibility.Technological progress, particularly the internet, is no longer just a tool for accessing information through media.Rather, it presents a valuable opportunity for individuals to engage in business activities that can enhance the quality of life for citizens.Moreover, a country's natural resources are no longer the main factor in competing with other nations.

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Instead, the capability of citizens to effectively use digital communication technologies has become essential for participating in digital economic activities.This skill is now a fundamental asset that every individual entrepreneur must possess.

If we look more closely at the opportunities brought about by advancements in technology and information, one key opportunity is the rise of an online market.This opens up business possibilities that anyone can take part in.To make the most of these opportunities made possible by technology, it is important to have an entrepreneurial mindset, especially among the younger generation, particularly students.Students require particular focus because they are at the highest level of education and are expected to shift from seeking employment to creating job opportunities.The campus should become a place where young entrepreneurs, who are creative and innovative, can emerge and face the challenges of the modern era. Universitas Pendidikan Indonesia currently has a program aiming to involve 2000 students in entrepreneurship.This initiative is not only meant to develop young entrepreneurs but also to contribute to improving the country's economy.

Theoretical Review

Citizenship learning, also referred to as civic education, is a type of learning that aims to develop individuals who are knowledgeable, informed, and aware of their rights and responsibilities.The main goal of citizenship learning is to foster democratic citizens who can actively engage in the activities of their society, country, and government.

Sapriya and Azis mentioned that good citizens, or democratic citizens, are those who can adjust to their surroundings, beginning from the family environment up to the global level.They also emphasized that a citizen should have the capability to enhance their skills in the economy to improve their own well-being.[1] Basically,

Citizenship Education is not separate from other related subjects, such as economic civics and vocational civics. Danial explained that the economics of citizenship involves the development of advanced economic concepts, such as political economy or economic policy.[2]

When citizens are more aware of their country's economic situation, the state's income tends to increase.As state income grows, the overall well-being of the people also improves.For example, citizens in the United States are considered economically advanced due to their strong sense of tax responsibility.In Muslim countries like Arabia, Egypt, Jordan, and Syria, the practice of zakat plays a significant role in raising awareness about the importance of welfare for the community.Therefore, to foster economic awareness among citizens, it is essential for every individual to develop their economic creativity.This can be achieved by introducing economic education in schools.The government also has a crucial role in promoting economic activities, which is expected to lead to national prosperity.[3]

Economic development is closely associated with technological advancement; however, human development remains the fundamental element of this process. Todaro also emphasized that technological progress ultimately contributes to the improvement of human capabilities. In essence, economic development aims to empower individuals who have limited access to development resources by providing them with opportunities to become self-reliant and actively contribute to the development of their communities and the nation as a whole.[4]

The Fourth Industrial Revolution has significantly influenced the global economic landscape. According to Klaus Schwab, its impact on the world economy is expected to be extensive and multidimensional, making it difficult to isolate the effects of one technological transformation from another [5]. The World Economic Forum's Global Risks Report 2017, as cited by Savitri, highlighted that the Fourth Industrial Revolution has the potential to improve income levels and enhance the quality of life for people worldwide. However, the economic gains generated by these technological developments are increasingly concentrated among specific groups. Such unequal distribution may contribute to political polarization, social fragmentation, and declining public trust in institutions that are expected to promote inclusive and equitable economic growth.[6]

The opportunities and advantages generated by the Fourth Industrial Revolution are not distributed equally among all individuals and communities. Therefore, it is important to promote equitable access to technological and economic benefits by supporting those who have received limited advantages from improvements in living standards, employment, and economic opportunities resulting from the First, Second, and Third Industrial Revolutions.

E-commerce has emerged as one of the most prominent developments in the Industrial Era 4.0, providing a digital platform for conducting buying and selling activities through electronic networks. Laudon and Laudon describe electronic commerce as the process of purchasing and selling goods electronically between consumers and organizations through computerized business transactions.[7] This concept involves three fundamental elements: electronic buying and selling processes, the participation of consumers or business organizations, and the use of online computer networks to facilitate commercial transactions. The rapid expansion of Internet usage has further accelerated the growth of e-commerce, with an increasing number of consumers adopting online purchasing practices and businesses shifting their commercial activities to digital platforms. The growth of major online businesses, such as Amazon, demonstrates the extensive reach and potential of e-commerce, enabling

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companies to serve consumers across multiple countries and geographical regions.[8]

Method

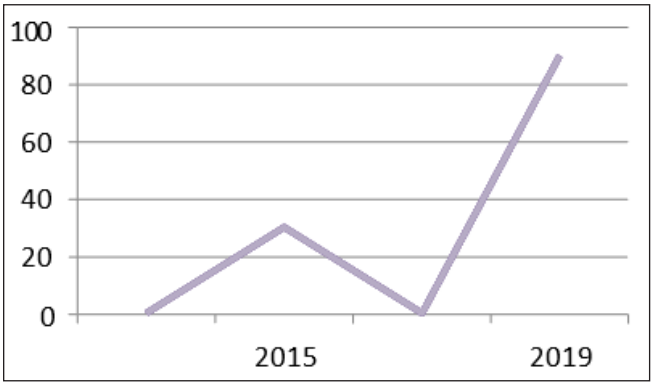
A systematic research approach is essential for conducting a study effectively, as the selected methodology influences the overall perspective, procedures, and direction of the research. This study adopts a qualitative research approach using a literature review method to examine the relevant concepts and findings. Data were collected through document analysis, review of relevant literature, interviews, direct observations, and field notes. These methods were employed to obtain comprehensive information and support the analysis of the research topic.

The qualitative research approach is commonly used to investigate natural and social phenomena within specific methodological frameworks. Creswell explained that qualitative research is particularly appropriate when the variables associated with a research problem are not clearly identified and require further exploration. It enables researchers to gain a deeper understanding of a phenomenon by examining participants' perspectives and experiences, especially when existing literature provides limited information about the subject.[9] In this study, a qualitative approach is considered appropriate because the research focuses on exploring and describing how economic citizenship can be strengthened among UPI students in the Industrial Era 4.0 through the utilization of e-commerce.

Result and Discussion

According to data reported by Indonesia's Ministry of Communication and Informatics in 2019, the value of e-commerce in Indonesia increased by approximately 78%, representing one of the highest growth rates globally.[10] This trend is further supported by the E-Conomy SEA 2019 report, which indicated that the average growth of the digital economy in Southeast Asia had remained within the range of 20–30% annually since 2015. The report also demonstrated the growing competitiveness of Southeast Asian countries in the global digital economy, with Indonesia and Vietnam emerging as two of the countries with the largest digital economy values in the region.[10]

The rapid expansion of the digital economy creates greater opportunities for citizens to participate in economic activities and gain more equitable access to emerging business opportunities. This development is expected to increase public awareness of the country's economic potential and encourage individuals to actively participate in digital economic activities, thereby improving personal income and contributing to overall national economic growth.



Grafh 1.E-Commerce value growth in Inddonesia

A 2018 McKinsey study titled "How Online Commerce Is Driving Indonesia's Economic Development" projected that Indonesia's online commerce market could reach approximately US$55–65 billion by 2022, comprising around US$15–25 billion from social commerce and approximately US$40 billion from e-tailing.[13] The substantial expansion of digital transactions during the Industry 4.0 era provides significant opportunities for students of the Indonesian University of Education (UPI) to participate as young digital entrepreneurs. Most UPI students are between 18 and 28 years old and belong predominantly to Generation Z, a demographic generally characterized by familiarity with digital technologies and online platforms. Consequently, their technological competencies can be utilized to develop and manage online businesses. The findings indicate that e-commerce adoption among UPI students is relatively high and can contribute to improved economic well-being by enabling students to creatively market and sell products and services through digital platforms.

Conclusion

The rapid advancement of digital technology during the Fourth Industrial Revolution has brought substantial changes to various aspects of human life, particularly in the way commercial transactions are conducted through the emergence of diverse e-commerce platforms. This development provides significant opportunities for entrepreneurs and business owners to expand their markets and conduct transactions more efficiently. Universitas Pendidikan Indonesia (UPI), through its initiative to develop 2,000 student entrepreneurs, can utilize e-commerce as an effective medium for business development and economic participation, thereby contributing to the strengthening of citizens' economic conditions. Such economic empowerment is expected to promote prosperity that is distributed fairly and equitably across society. In this context, students are not limited to being consumers in the digital economy but can also become creative and

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innovative entrepreneurs by integrating their academic knowledge with technological developments and the needs of society. Through active and inclusive participation in the digital economy, students can contribute to the development of a stronger citizenship economy and enhance their ability to adapt to the challenges of globalization.

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