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The use of information in the world economy: globalization trends

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Abstract: The relevance of the investigated problem is the modern development of the world economy in the conditions of globalization. Because the information caused a breakthrough in development of the world economy, became its new wealth, it was seen that it is appropriate to research modern trends of its use. Information is used in all branches of the economy. It has power and a dynamic character. Information is capable of improving the economy, as well as destroying it, improving the environment, as well as polluting it, and influencing the political and economical development of the country. The use of information helps countries synchronize with the world economy in order to globalize it. The rational use of information, the right approach and technological capabilities contribute to the development of a circular economy, highly professional labor migration, adaptation to the climate change and the pandemic, and the formation of the economic consciousness of the population through mass media. The purpose of this study was to identify and characterize the main globalization trends of the use of information. To achieve this goal, economic, sociological, technological and scientific literature of 2022 was analyzed. The main results. With the help of empirical studies and analysis of scientific literature and data, the following globalization trends in the use of information were identified: change in the nature and method of information use by the global population, use of information for the development of a circular economy, use of databases, information exchange and use of information by mass media. The practical meaning of this research is the application of findings about the latest trends in the use of information for enterprises striving to enter the global market in further scientific research.

Keywords: Economical globalization, information in the circular economy, informational society, globalization trends, informational economy.

Introduction

The use of information in the modern world determined the current state of the world economy. Information, knowledge, informational technologies are used in various ways for achieving different goals. Globalization was possible at some point because of the information. Trends of the use of information are constantly changing and are conditioned with many factors.

Research problem

The work reveals the problem of using information in the conditions of world globalization of economy and the main trends are revealed. It was found that the problem of using information under the conditions of globalization is actively researched by scientists of various fields. Scientists actively studied issues of using information, providing technological, economical and legal conclusions in certain aspects of this issue. Jäger-Roschko & Petersen (2022), Dubel, Khan & Abonyi (2022), Lawrence et al. (2021), Schaeppman et al. (2022) investigated the use of information in the circular economy, emphasizing its relevance. Chatty & Majid (2022) investigated the impact of the use of informational communication technologies in urbanization over the past 18 years in developed and developing countries. Stiglitz (2022) emphasized the globalization features of the use of information in the conditions of pandemic and climate change. Borysenko et. al. (2022) studied the development of international media space and its impact on international relations, peculiarities of the use of information by mass media in the conditions of globalization. Prokhorenko (2022) noted the use of information under the influence of globalization, which affected the professional mobility of specialists. Therefore, information has many manifestations, ways and purposes of its use. Information is the main factor in globalization, so the study of various aspects of information use were actively conducted by scientists.

Research focus

The focus of this study were globalization trends of the use of information, such as the circular economy, the influence of the pandemic and climate change, information-communication technology, the use of information by mass media, professional migration, the changes in consumer behavior. Attention was emphasized on changing the economic model in the world. Characteristics of globalization aspects in the world and digitalization of communications were conducted. Separate attention is devoted to the issue of globalization, examples of the impact of globalization on the world economy are given. Conclusions about the main globalization trends in the use of information in the world were made.

Research Aim and Research Questions

The purpose of this study was to identify and provide characteristics of globalization trends in the use of information.

The task of the research: analyzing data to understand the degree of influence of various factors on the processes of informational use and the development of the informational space.

Research hypothesis: it is proposed to investigate the impact of using information for improving economic systems, improving the environment and level of life development, improving and spreading information-communication technologies for use in the circular economy.

Research Methodology

To implement the set goals, the research was carried out in certain stages, combining analysis of theoretical material, research data in more than 60 countries of the world, scientific studies of applied and theoretical material. These stages were: the search of the mentioned researches, the search of scientific literature; analysis of research data and scientific sources; comparison of discovered data, development of conclusions and recommendations. The research of scientists Chatti & Majid (2022) became the empirical basis of the study. 60 developing countries and 34 developed economies during the period from 1998 to 2016, data from scientific works of Ukrainian and foreign scientists.

Instrument and Procedures

To implement the set goals, the research was carried out in certain stages, combining the analysis of theoretical and statistical material, and the performance of practical tasks. These stages were:

1. search for empirical data and scientific sources;
2. analysis of the specified data and sources;
3. comparing data by years, providing conclusions and recommendations and forecasting.

Data Analysis

The system of general scientific and special scientific methods was chosen as the methodological basis. Analytical method was chosen as the main one, which makes it possible to reveal the degree of influence of the use of information-communication technologies on the state of the environment and the level of pollution. The integrated method made it possible to combine the knowledge and practice of different fields, in particular: computer technology, economics and sociology. The synergistic methodology made it possible to determine further directions of research on the use of information in the condition of globalization.

Research Results

Modern civilizational, dynamic and universal changes have a significant impact on the development of humanity. They follow such trends as scientific-information technologies and globalization. The use of information had a significant impact on the world economy (Prokhorenko, 2022, p. 182). The digital economy, having integrated into the real economy, has significantly transformed and developed traditional industries and has given a new impulse to economic development (Huo & Wang, 2022). The latest developments of "informationist" scientists testified that knowledge is the greatest wealth and possession of modernity. However, mercantilism sees gold and silver as main values, marginalism considers wealth to be the main value, physiocrats see agricultural products as the main value. Society understands the value of information, but does not yet have necessary experience and laws in its use. The world economic model is being supplemented with a new sector - information regarding industries, services and agriculture. This sector is characterized by the use of labor and business skills of various production factors. And information is the main source of income (Sobolyeva & Ivanova, 2022, p. 94). The traditional economic model will no longer be a perspective for society in the future. Along with the development of information technology comes an anxiety that the world society has for the future. The concept of sustainable development has become a new paradigm for the development of society for the future. Environmental problems faced by individual areas and the entire biosphere are among the most important problems in the global economy. In modern conditions of scientific and technical progress, considering all the achievements in various fields of the economy, people had to deal with issues of improving the quality of life, not survival. Therefore, countries should unite for the sake of the future development of the world, preservation of the ecological structure, using the opportunities that the modern world of information technologies has (Dubel, 2022). Models of communication between people, governmental structures and business have changed with the development of information- communication technologies, as it has become much easier to establish and maintain contacts and to interact over long distances. The use of information technologies is more uniform and active than the distribution of income (Ablamska, 2022). Globalization aspects in the world are manifested in culture, economy, social structure and politics. The economy in the conditions of globalization is characterized by the simplification of communications between individual enterprises, states, the movement and adjustment of industrial facilities in different countries, by reducing income taxes, free trade and capital movement, reducing costs for human and natural resources (Prokhorenko, 2022, p. 182). With the beginning of the third millennium, the world becomes a global economic system, an economic mechanism emerges and operates. The era of global integration, which is due to the introduction of new technologies and development of world infrastructure, has brought changes in people's lives. First of all, globalization is characterized by the transition to an integrated world economy, it organizes and spreads the economic activity of individual countries between each other, causing their economic openness and interdependence. (Plahotnik, 2022, p. 63). The process of globalization of the economy contributed to interrelationships of the market of state capital, technology, goods and others. As a result, consumers had access to new benefits, to up-to-date and reliable information about goods and services, and began to dictate their rules to producers in certain aspects (Ablamska, 2022). Scientists consider different terms for the use of information in the world economy. Then came such a concept as the information society, which exists due to the role of information. It exists in conditions of digitalization and globalization, has access to knowledge and is characterized by permanent raising of the level of culture and education. Residents of developing countries have been able to join the world community through the use of information. As Dubel (2022) notes, "Information has a multiplier effect. Information generates knowledge and some kind of closed circle arises. Knowledge turns into a skill that increases income. An ever-increasing share of income is used to satisfy intellectual needs, which leads to an increase in the quality of life. In order to maintain a higher quality of life, a society needs even more information... A need for new knowledge arises...The synergistic effect of information flows extends to various fields of society's existence." Globalization is an international historical process of integration of a country into the world community, with regard to the circulation of goods, services, funds, information, people, expansion of its forms, fields and territories of activity, which aims to rationalize global distribution of resources and strengthen international relations. The most globalized countries include Switzerland, the Netherlands, and Belgium, which concentrate world processes in politics and economics in themselves. The development

of countries in the conditions of globalization is a new reality that creates an economy with a single market (Plahotnik, 2022, p.67). Countries and businesses have the freedom to choose business partners. Transnational corporations, financial globalization and economic practices are developing. Information technologies in the conditions of globalization contribute to the emergence of the world economic, social and cultural space (Sobolev & Ivanova, 2022, p. 96). Digitization of communications shows that about 80% of consumers in the world use smartphones, communications pass through digital means, influencers in social media successfully promote their recommendations and points of view, the global online education market exceeded \$50 billion in 2016 and was expected to increase by 5 times until 2022. A factor that influences such consumer behavior is the development of technologies, which at the same time expands consumer opportunities and changes people's lives. In such usability conditions, comprehensibility and ease of use are important when a consumer uses technologies. In such conditions, there is a significant potential for business development (Ablamska, 2022). Examples of globalization include: the development of Microsoft, Oracle, Procter & Gamble, Mars, General Motors, McDonalds and others, producing together 1/5 of the world production of goods and services; increase in the number of people living in large cities; in 2020 it was noted that there were more than 80 billion devices connected to the Internet; increase in the number of migrants; companies moved production to China and other countries with cheap resources; there is an opportunity to buy and sell goods in different countries (Plahotnik, 2022, p.67). The world market of personal computers in 2020 was 302.6 million units, (this is 13.1% more than in 2019), in 2021 almost half a billion new users were registered in social networks, the overall duration of time online was about 1.3 billion years, trillions of dollars were spent on the Internet (Sobolyeva & Ivanova, 2022, p. 97). Speaking about globalization trends in the use of information in the world economy, the first thing to emphasize is that people have changed their interests, behavior, use of information technologies and Internet tools. The population of the planet uses social networks, trading platforms of different countries, follows the news about the world and learns from global educational resources without leaving home. User behavior at its core changed with the development of information technologies: Facebook, Instagram and Twitter revealed people's profiles, encouraged people to share information about themselves, "today the era of tracking has come: what time did we wake up, how far we walked, how we walked the dog, etc. Consumers spend almost all their free time with gadgets, which speed up the already fast rhythm of life and make the exchange of information instantaneous (Ablamska, 2022). In such information-globalization processes an international competition grows, world markets are influenced by the redistribution of economic and political fields and the role of intellectual resources grows. "The continuous exchange of information and intellectual products and services between countries stimulates the attraction of increasingly large investments specifically in the information and communication industry" (Borysenko, 2022, p. 123). The information economy has a massive, global character and arises due to the desire for stability, development, deterioration of ecology, reduction of natural resources, change of values, such as standard of living, success, well-being and recreation (Sobolyeva Ivanova, 2022, p. 95). The stability of international relations is a guarantee of the stability of the world economy and politics, and allows for effective resolution of conflicts between states. And it is in the information space where social relations arise, which play an important role in the system of development of international relations (Borysenko, 2022, p. 123). Speaking about globalization trends in the use of information in the world economy, one should note the use of information in the circular economy. In scientific literature issues of using information and information technologies to achieve the efficiency of the circular economy are widely discussed, as well as the goals of sustainable development. In the conditions of economic globalization and urbanization, the number of negative phenomena such as pollution, traffic jams, and accidents is increasing. As a result of research conducted on the interaction of the development of information-communication technologies (ICT) and urbanization on the example of 34 developed countries and 60 developing countries, for the period from 1998 to 2016, the negative impact of ICT on carbon dioxide emissions from transport activities and fuel consumption was revealed (Chatti & Majid, 2022). The circular economy, which is aimed at rational consumption and recovery of resources, can be a promising mechanism for implementing the principles of sustainable development (Dubel, 2022) if information technologies and information are used rationally. To reduce carbon emissions it is considered expedient to apply the "smart cities" approach developed on information- communication technologies and smart

transport systems. This requires a high level of ICT implementation, as they fundamentally provide the prerequisites for smart technologies, making human activity more efficient and therefore less harmful to the environment (Chatti & Majid, 2022).

Lorentz et al. (2022) investigating the use of information in circular economy, conclude that the information market provides an opportunity to sell access to the use of the disposable database. Dynamic information can be sold to different owners. This ensures that it is stored and transmitted. For example, a user can sell information about a term use of a circular economy product, spare parts for exchange, etc., while choosing which information he wants to share and which he doesn't. In addition, other issues need to be addressed. For example, how to collect information in a convenient way or solving purely technical problems, such as data format, etc. Jäger-Roschko & Petersen (2022) revealed the specifics of storage, exchange, use of information and its storage in ICT used in the circular economy. The authors noted that the information related to the product is all information that comes with the product, such as a label. Persons interested in a particular product are given access to this information. When disposing of the product, the information about a specific product is clear. Barcode labels or QR codes are suggested for identification, but such data is not suitable for mass processing, as each product must be scanned separately. It was proposed to use wireless technologies such as WiFi, Bluetooth or NFC. It was also noted that the object of information in the circular economy is the product - data about it, such as statistical or dynamic information, such as the age, condition of the product, procedures of repair or replacement of spare parts, date and place of manufacture of the mobile phone, presence of chemicals in the contains of the battery, manufacturer and any other information that describes the product. Information is a key component in achieving a developed circular economy, but no optimal solutions have been developed for the use of the information base from the point of view of a circular economy. To achieve optimization of information exchange and reduction of its loss, improvements in technological processes regarding recycle technologies were proposed (Lawrence and etc., 2022, p. 365). The latest forms of information exchange were considered in the scientific literature: (1) blockchain – transparent and secure exchange of information, encourages willingness to share information; (2) digital twins – virtual copies of the product that contain up-to-date information about the product in real time, which can be used in the maintenance process and stored after disposal (Jäger-Roschko & Petersen, 2022). Increased transparency of information exchange helps to save on transportation costs, inventory storage, reduce waste, manage productivity and efficiency, automate processes, control energy consumption, emissions and compliance with legal and technical regulations (Khan, & Abonyi, 2022). Today, the impact of the pandemic on development remains an equally urgent problem of the global economy, as well as globalization trends in the use of information that arose after the pandemic. After the start of the COVID-19 pandemic, the world community faced many urgent problems in the field of information use. The pandemic showed the need to solve global problems and transform industrial policy through cooperation and coordination (Stiglitz, 2022, p. 812). National systems such as health care, pensions, social security and environment were disrupted with the onset of the pandemic. This further aggravated the existing problems that arose after the economic crisis of 2008: climate change, reduction of natural resources and pollution (Schaeppman et. al., 2022, p. 146). Scientists emphasize the need to solve these problems through global cooperation, as all countries are interested in preventing climate change, preventing the pandemic and overcoming its consequences. Therefore, the creation of a "territory of agreement and cooperation" is required through the exchange of information (Stiglitz, 2022, p. 819). For this, it is necessary to solve the problems regarding the availability of important social data of countries, on the movement of goods and people, while preserving the conditions of confidentiality of information, and to give preference to interaction (Schaeppman et al., 2022). The problems of using information through the mass media, which influence the socio-psychological attitudes of the population and shape perceptions of various phenomena and events, remained no less relevant. Mass media is able to convey certain informational messages and attitudes to people that create a certain collective consciousness. Mass media has a certain level of power in society. Mass media have several ways of conveying information - partial (used more in television and can disorient viewers) and sequential (used in print mass media and reveals information in more detail).

Mass media can have both positive and negative effects on society. "Informational" and "hybrid" wars are conducted through mass media . Mass media can also act as a peacemaker and contribute to

the resolution of conflicts (Borysenko, 2022, p. 123). In the global economy, the way information is used by the mass media has an impact on society, controls its moods, encourages the purchase of certain goods and forms an idea in society of the state of the economy in certain territories. The next globalization trend in the use of information is the professional mobility of specialists. Sobleva and Ivanova (2022, p. 94) noted that "globalization processes affected the economic and social spheres, raising the level of people, forcing them to seek self-affirmation, acquire additional knowledge, and increase the level of professional qualifications." Intellectual migration of highly qualified workers has become possible thanks to the availability of information, the development of information systems and technologies, the emergence of new obtaining systems, processing and providing information, and the creation of global networks that connect labor markets. A global labor market is emerging, the approach to the workplace is changing, the concept of "virtual cells" and virtual employment is emerging (Prokhorenko, 2022, p.185).

Discussion

The obtained results indicate that globalization is a process of integration of the country's economy into the world economy. Modern globalization is conditioned by the informational breakthrough in the world and by the recognition of information as the main wealth and a way of development. Information technology is developing faster than the economy. It is able to achieve both positive and negative results. Thus, a current study was carried out by Chatti & Majid (2022), which examines 60 developing countries and 34 developed economies during the period from 1998 to 2016 and concludes that information- communication technologies in case of their irrational use had a negative impact on the environment, such as carbon emissions. Stiglitz (2022) rightly emphasizes that the pandemic has exposed and aggravated existing problems and trends, including increasing inequality and the transition to digital technologies. He also notes that digital technologies are global, so the necessary regulatory framework must also be global. We agree with Schaepman et al. (2022), who note that the challenges the world is currently facing – institutional, humanitarian, economic, climatic, informational, pandemic – cannot be solved separately. This study became a logical continuation of scientific works that raise many problems and require further study.

Conclusions and Implications

After conducting this research, a number of conclusions can be drawn. The use of information has had a key impact in the world economy. And information has become the main source of income. The economy in the conditions of globalization is characterized by the simplification of communications between individual enterprises, states and people. The population's use of information has created an informational society that is developing in conditions of digitization and globalization, and has access to knowledge. The use of informational technologies in the context of globalization contributed to the emergence of the world economic, social and cultural space. However, the use of information in conditions of economic globalization creates new challenges and tasks. In particular, the development of a circular economy, which is aimed at rational consumption and recovery of resources, can be a promising mechanism for implementing the principles of sustainable development. The impact of the pandemic on the development of the global economy and globalization trends in the use of information that arose after the pandemic remains a relevant problem today. The global economy was influenced by the way the mass media uses information, which controls people's mood, encourages the purchase of certain goods and forms the public's perception of the state of the economy in certain territories.

The scientific study continued researching the issue of current problems of the use of information and identifying the main trends arising in the conditions of globalization. Prospects for further research. The works of scientists who analyzed current trends in the use of information in the world economy received further development. The interest of the authors in using information for the development of the circular economy, for improving the state of the economy after the pandemic and climate change was revealed. This topic will require further research in the future.

References

- Ablamska, V. (2021). Trends that affect the future of the digital economy. Economic and business administration development: scientific currencies and solutions. Kiev, National Aviation University. https://dspace.nau.edu.ua/bitstream/NAU/53727/1/%D0%B7%D0%B1%D1%96%D1%80%D0%BD%D0%B8%D0%BA%20%D0%A2%D0%BE%D0%BC%201_%2021.01.2021%20%D0%A4%D0%95%D0%91%D0%90%20-%D1%81%D1%82%D1%80%D0%B0%D0%BD%D0%B8%D1%86%D1%8B-4-6.pdf
- Borysenko, O., Vasyl'yeva, O., Katerna, O., Masiuk, I., & Panakhi, O. (2022). Modeling the Risks of the Global Customs Space. *Journal of Risk and Financial Management*, 15(12), 598.
- Dubel, M. (2022). Circular economy as a mechanism for achieving sustainable goals development in the conditions of globalization and digitalization of the world economy. *Economy and society*, 39. <https://doi.org/10.32782/2524-0072/2022-39-13>
- Huo, P., & Wang, L. (2022). Digital economy and business investment efficiency: Inhibiting or facilitating? *Research in International Business and Finance*, 63(101797), 101797. <https://doi.org/10.1016/j.ribaf.2022.101797>
- Jäger-Roschko, M., & Petersen, M. (2022). Advancing the circular economy through information sharing: A systematic literature review. *Journal of Cleaner Production*, 369(133210), 133210. <https://doi.org/10.1016/j.jclepro.2022.133210>
- Khan, A. A., & Abonyi, J. (2022). Information sharing in supply chains – Interoperability in an era of circular economy. *Cleaner Logistics and Supply Chain*, 5(100074), 100074. <https://doi.org/10.1016/j.clscn.2022.100074>
- Lawrenz, S., Nippraschk, M., Wallat, P., Rausch, A., Goldmann, D., & Lohrengel, A. (2021). Is it all about Information? The Role of the Information Gap between Stakeholders in the Context of the Circular Economy. *Procedia CIRP*, 98, 364–369. <https://doi.org/10.1016/j.procir.2021.01.118>
- Plakhotnik, O., & Pavlenko, A. (2022). The impact of globalization on the development of the world economy and the economy of Ukraine. *Ekonomika Ta Derzhava*, 5, 62. <https://doi.org/10.32702/2306-6806.2022.5.62>
- Prokhorenko, T. (2022). Transformation of the specialists professional mobility forms under the influence of globalization. *The Bulletin of NLU Law Academy Named Yaroslav the Wise The Series of Philosophy Political Science and Sociology*, 2(53). <https://doi.org/10.21564/2663-5704.53.258168>
- Schaepman, M., Tarantino, M., Aggarwal-Khan, S., Biller-Andorno, N., de Giorgi, G., Ducrest, J., Messerli, P., Phakeng, M., Türk, V., & Stoffel, M. (2022). Are our data ready for the next global challenges? Resilient data for resilient societies and economies. *Environmental Science & Policy*, 138, 146–148. <https://doi.org/10.1016/j.envsci.2022.10.006>
- Soboleva, G., & Ivanova, A. (2022). Information economy. *Science and perspective*, (2 (9)). [https://doi.org/10.52058/2695-1584-2022-2\(9\)-87-99](https://doi.org/10.52058/2695-1584-2022-2(9)-87-99)
- Stiglitz, J.E. (2022). The world economy: Where to after the pandemic? Rethinking global cooperation. *Journal of Policy Modeling*, 44(4), 812-819. <https://doi.org/10.1016/j.jpolmod.2022.09.011>
- Chatty, V., & Majid, M. T. (2022). Information communication technology (ICT), smart urbanization, and environmental quality: Evidence from a panel of developing and developed economies. *Journal of Clean Production*, 366, 132925. <https://doi.org/10.1016/j.jclepro.2022.132925>