

DEVELOPMENT OF INFORMATION TECHNOLOGIES IN UKRAINE: CURRENT ISSUES

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Анотація

У статті досліджується проблеми розвитку інформаційних технологій в Україні і способи їх вирішення.

Ключові слова: IT в Україні, Інформаційні Технології в Україні.

Abstract

The article examines the problems of information technology development in Ukraine and ways to solve them.

Keywords: IT in Ukraine, Information Technologies in Ukraine.

Introduction

Information technology is two words that everyone has probably heard before. "IT" is a widely used and generally accepted term that encompasses a wide range of tools and applications, including hardware, software and networking technologies, that are used to create, store, transmit and analyze data. These technologies are widely used in all industries, from business and education to medicine and entertainment, and they have penetrated almost all areas of our lives, making them easier for some and more difficult for others. However, over time, the second category of people is becoming less and less, all modern people deal with IT technologies, so we can say that the 21st century is the century of information technology development, and this article examines how successfully this century is going in Ukraine.

Research results

The Ukrainian IT industry is a fairly fast-growing sector of the economy in the country, thus becoming one of the leading sectors of the Ukrainian economy[1]. Despite the achievements, it is worth noting that there are certain problems that hinder the development of information technology in Ukraine, which have also become more acute with the beginning of Russia's war against Ukraine[5]. Among them are insufficient funding and support from the state and private investors, the outflow of leading specialists and companies abroad, insufficient training of specialists[4,5]. All these problems simultaneously contribute to each other.

Information technologies are studied at more than 150 universities in Ukraine, as well as at the basic level in all educational institutions, and in most of them the problem of outdated IT education is quite relevant[8]. Despite the dynamic development of the information technology, many educational institutions teach an outdated curriculum that does not reflect the latest trends and realities of the IT market. This leads to the fact that graduates do not receive sufficient practical training and may look for alternatives abroad, as educational institutions are not able to use modern technologies in their practical activities due to the lack of proper infrastructure not provided for in the curriculum, which could provide students with access to modern software and equipment[7].

Insufficient support from the government and insufficient investment in the IT sector could lead to Ukraine falling behind globally and losing competitiveness in the industry. Ways to address this problem may include increasing the state budget for the development of the industry, creating favorable conditions for investment, supporting startups and small businesses engaged in information technology, and reducing bureaucratic barriers to the development of the industry.

According to the Ukrainian tech ecosystem dashboard published by the Ministry of digital transformation of Ukraine, as of the beginning of 2022, there were 2,234 IT companies operating in the country[2], employing about 228,000 IT professionals[3]. The number of people employed in the IT industry in Ukraine is 2% of the total number of people employed in Ukraine, which has ensured the growth of computer services exports from 1.8% to 3.5% of GDP and an increase from 13.4% to 37.8% of total services exports[1] over 6 years. Outflow of qualified specialists abroad because of existing problems, such as unfavorable working conditions and poor

education, can cause a shortage of personnel, reduce the level of innovation and competitiveness of products and services of Ukrainian companies, lead to the industry lagging behind and a reduction in IT exports. It is already known that under the worst-case scenario, 52,000 specialists, which is a quarter of all working professionals in the country, may leave the country after the war ends[6]. To retain IT specialists, it is necessary to improve working conditions and salaries for industry professionals, create favorable conditions for the development of national infrastructure for software and hardware development, attract foreign investors and experts for cooperation and exchange of knowledge and experience, and support IT specialists who lost their homes due to the war by building specialized mixed districts, technology parks, and concentrating IT engineers in them. The construction of specialized IT technology parks can help the Ukrainian IT sector as a whole.

In many countries around the world, IT technology park infrastructure is used to create an ecosystem where companies can collaborate with each other, share ideas and resources to create new products and services. Such an ecosystem can also facilitate the rapid development of startups and other young companies that have access to the necessary resources and opportunities for growth. IT technology parks are specially created infrastructures for hosting companies from the field of information technologies. Such parks usually have large spaces with the necessary infrastructure to house servers, networks, offices and other premises that can be used by companies for software development and testing, as well as for scientific research. Ukraine could take advantage of the experience of countries where IT technology parks are common to develop its own IT industry. The creation of such parks can help create new jobs, attract foreign investment, and accelerate the country's overall innovative development. In addition, the presence of such infrastructures can attract talented engineers and developers from other countries, which can enrich the Ukrainian IT market with diverse cultural and professional perspectives.

Conclusion

In the course of the study, it became known that IT in Ukraine is not perfect. These problems are interrelated and complicate the development of the IT industry in Ukraine. However, despite all this, in recent years, the IT industry has become one of the leading sectors of the Ukrainian economy. In order to preserve and develop the IT sector, it is necessary to provide adequate support from the government and investors, improve the quality of IT education, improve working conditions and salaries for specialists, and attract foreign investors and experts to cooperate and share knowledge and experience. Such steps will help ensure the stable development of the industry and retain Ukrainian IT professionals in the country, which is important for the competitiveness and development of the industry.

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