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THE MAIN WAYS OF FORMING THE INFORMATION POLICY OF UKRAINE

Abstract. *The development of the information society is based on the latest information and telecommunication technologies and communication facilities. The national information space is experiencing a new stage of development, related with integration into the world and European information space. The forming of an information society is based on the implementation of an effective information policy. Information technologies open up new unique opportunities for the development of the economy and raising the standard of living of society. Applied use of information systems makes it possible to improve the mechanisms of humanization and democratization of society, increases the level of well-being of its members, ensures economic growth and contributes to increasing the competitiveness of the national economy. At the current stage in Ukraine, there is no model for calculating the impact of information and communication technologies on the economy and spheres of life. The level of consumption of ICT products and services indicates the level of modernization of the country and the level of its productivity, efficiency and competitiveness. There are no official data on the coverage of the country's territory by digital infrastructures and the level of consumption of relevant services. For this purpose, it is important to identify and study factors of objective and subjective impact on the domestic information sphere. One of the directions is the analysis of the preconditions for Ukraine's entry into the world's information space and the necessity of identifying ways to improve the functioning of the information sphere. The article discusses the problems of forming the state information policy. Information threats to the national security of Ukraine and ways to ensure information security are analyzed. The perspective approaches to ensure the effectiveness of reforming the information policy of Ukraine are proposed.*

Key words: information infrastructure, information policy, information security, information sovereignty, information threats.

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ОСНОВНІ ШЛЯХИ ФОРМУВАННЯ ІНФОРМАЦІЙНОЇ ПОЛІТИКИ УКРАЇНИ

Анотація. *Розвиток інформаційного суспільства базується на новітніх інформаційно-телекомунікаційних технологіях і засобах зв'язку. Національний інформаційний простір переживає новий етап розвитку, пов'язаний із інтеграцією у світовий та європейський інформаційний простір. Формування інформаційного суспільства базується на реалізації ефективної інформаційної політики. Інформаційні технології відкривають нові унікальні можливості для розвитку економіки та підвищення рівня життя суспільства. Прикладне використання інформаційних систем дає змогу вдосконалити механізми гуманізації та демократизації суспільства, підвищує рівень добробуту його членів, забезпечує економічне зростання та сприяє підвищенню конкурентоспроможності національної економіки. На сучасному етапі в Україні відсутня модель обчислення впливу інформаційно-комунікаційних технологій на галузі економіки та сфери життя. Рівень споживання ІКТ-продукції та послуг свідчить про рівень модернізації країни та рівень її продуктивності, ефективності та конкурентоздатності. Відсутні офіційні дані щодо покриття території країни цифровими інфраструктурами та рівня споживання відповідних послуг. Для цього важливо виявити та вивчити фактори об'єктивного та суб'єктивного впливу на вітчизняну інформаційну сферу. Одним із напрямів є аналіз передумов входження України у світовий інформаційний простір та необхідність визначення шляхів удосконалення функціонування інформаційної сфери. У статті розглянуто проблеми формування державної інформаційної політики.*

Проаналізовано інформаційні загрози національній безпеці України та шляхи забезпечення інформаційної безпеки. Запропоновано перспективні підходи щодо забезпечення ефективності реформування інформаційної політики України.

Ключові слова: інформаційна інфраструктура, інформаційна політика, інформаційна безпека, інформаційний суверенітет, інформаційні загрози.

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Formulation of the problem. Nation's information sovereignty at the present stage of state's development and formation of the information society in it requires detailed consideration of the problem of country's media information space. The pulse and wave character of view development on the latest events and the nature of information and communication environment development must pass through a restriction system in order to develop a fundamental concept and criterion basis for further practical implementation of the principles of mass communication political security to achieve the best possible level of country's media and information space security.

Analysis of recent research and publications. Information sphere functioning is a basis of the scientific research of domestic and foreign scientists. Such scholars as E. Tikhomirova [1], I. M. Porat [2], G. Pocheptsov [3], O. Sosnin [4] deal with the study of state's role in the formation of the information society and providing media and information security.

E. Tikhomirova believes that a balanced state information policy of Ukraine is formed as an integral part of its socio-economic policy [1], based on the priority of national interests and threats to the national security of the country.

M. Porat recommends that the sectors of the information economy to be considered [2]. The primary sector is producing information. In the secondary sector, information is used as a product for further production and needs protection.

G. Pocheptsov considers information security as a global problem of information protection [3], information national space, sovereignty of the country and information provision for the adoption of governmental decisions.

O. Sosnin notes that every state should take care of its information security when protecting its information interests [4]. This also requires the strengthening of Ukrainian statehood.

Setting objectives. The purpose of the article is the need for theoretical grounding of the main directions of state information policy in order to protect the national media space and guarantee information security.

Presentation of the main research material. In Ukraine, freedom of speech is one of the fundamental democratic principles. The leading role is played by printed mass media, broadcasting companies and recently the Internet. The formation of independent mass media is constrained by available market means, high taxes, the cost of paper and services, insufficient management level, professional staff availability and administrative intervention. The important point is the need

to support state mass media. This is material and technical and financial support of the development and financing of public broadcasters and publishers. This will allow competing with commercial mass media, which by technical support are close to the world's ones.

At the present stage the world broadcasting is in the process of radical changes in production technology and program distribution, heading for the unification of tele-radio-information technologies into a single global information system. At the same time the existing broadcasting network in Ukraine is physically worn and morally obsolete [1]. Compared to the world's best systems of distribution and production of television and radio programs, it is extremely costly, inefficient and every year requires more and more effort and money to maintain it in working order. Almost all technical means of state media have completely exhausted their resource. Operated technology uses electrical vacuum devices that require constant replacement and considerable energy. Current global trends in television show that transmitters based on solid-state amplifiers without the above mentioned drawbacks are the most promising ones. In the technique of studio and beyond-studio equipment of provincial and regional broadcasters the dominant position is occupied by the equipment of outdated analog recording formats [2]. The long-term strategic goal of Ukraine's state information policy (in broadened variant) is the formation of open information society based on the development of unitary state space of an integral state, its integration into the global information space taking into account national characteristics and interests while ensuring information security at domestic and international levels.

Ukraine is gradually losing its position as a technologically oriented country. This increases its informational vulnerability to the global trends of the information environment and the dependency on world leaders in the field.

Insufficient attention to innovative processes and high-tech production slows down the pace of economic development, reduces the efficiency of the resources usage, adversely affects the revenue generation and the structure of the country's balance of payments.

Studying and adapting foreign experience will help propagate government decisions and determine the role of the state in society at the national and regional levels. It will also facilitate access to the latest information and communication services. The priority directions of using information technologies by leading countries are given in the table 1.

Table 1

Directions of the use of information technologies by the countries of the world

Country	Areas of application for Information and Communications Technology
Germany	Full transfer of public services to the on-line system. This includes the possibility of filling in declarations, extending the validity of the documents of individuals, etc.
The UK	is an electronic multilevel interaction between government agencies, the residents, and business structures representatives
Estonia	Electronic expression of citizens' opinions on issues related to state governance, current state of affair cases and processes
USA	Publishing of official documents on Web-sites of the Country Government, payment of taxes through electronic systems, free access of the residents to statistical information on the activities of state authorities

Made by the author

Implementation of information and communication technologies involves the use of foreign experience. It concerns the introduction of regulatory and legal acts on the formation of the information society and the use of information and communication technologies at the governmental level and in all spheres of functioning of society - medicine, finance, insurance, education, etc.

Negative tendencies of innovation development appear simultaneously with positive technological changes - introduction of new communication

standards in the work of mobile devices, increase of mobile Internet bandwidth, increase of information resources exchange between users, dynamic growth of leading segments of the information space, etc. Innovative trends in the global market include the processing of a large amount of data, the development of e-business, mobility and cyber security, the characteristics of which are presented in Figure 1.

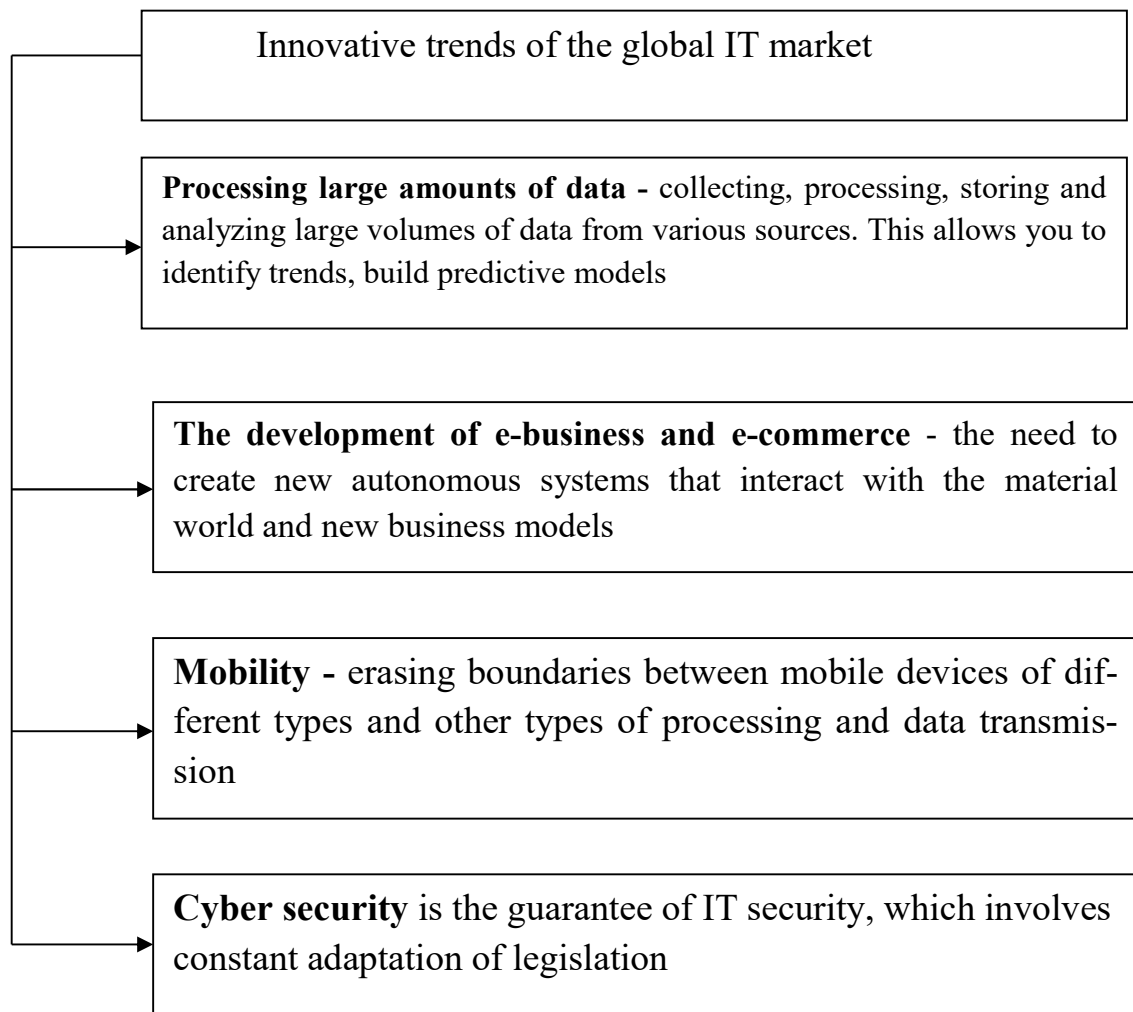


Fig. 1. Innovative trends of the global IT market

It should be noted that the development of ICT has a significant impact on the structural and dynamic parameters of the country's economic development-the company's production costs are reduced, and the movement of all types of capital is accelerated. At the same time, the structure of the economy, the methods of competition, and the interaction of producers and consumers are simplified [3]. This helps to accelerate the distribution of job within the country and between countries.

We will conduct an analysis of the impact of revenues received from the provision of services in the field of telecommunications and postal communications (mobile communications, Internet services) on the GDP of Ukraine in recent years. Statistical data (table 2) were used for this purpose.

Analyzing the data in Table 2, we can see that all indicators increased proportionally. It is worth noting that Internet services grew at a higher rate. Accordingly, revenues from the provision of Internet services in 2021 more than doubled compared to 2017 and amounted to UAH 15,807 million. At that time, the GDP of Ukraine grew only more than one and a half times and amounted to UAH 5,459 billion in 2021. Let's consider the formation of a linear regression of the assessment of the dependence of the GDP of Ukraine on the income received from the provision of

services in the field of telecommunications and postal communication, in particular, mobile communication and Internet services. To conduct the research, we selected official statistical data for the period 2017-2021 (Table 2).

As a result of the study, it was established that there is no significant correlation between input data, namely, the volume of gross domestic product, revenues from services provided in the field of telecommunications and postal communications, in particular, mobile mobile communications and Internet services. However, among the investigated indicators, Internet services are the most influential (Table 3).

Analysis of the information market shows that the importance of IT services in the structure of Ukrainian exports is growing rapidly. The income of the domestic IT business is mainly of foreign origin - Ukrainian developers cooperate with the USA, Great Britain, Germany, Canada, Israel, Sweden and Switzerland. In addition to the purely economic impact, the information industry also affects the domestic market and the social sphere. Programmers and highly specialized technicians are involved in the IT industry. Companies also work with designers, finance, HR, etc. More than a quarter of people in the teams of IT companies are non-technical specialists.

Table 2

Dynamics of GDP, income from services provided in the field of telecommunications and communications of Ukraine for the period from 2017 to 2021

Year	GDP, UAH billion (current prices)	Revenues from services provided in the field of telecommunications and postal services, UAH million.	Mobile communications, UAH million	Internet services, UAH million, (fixed access)
2017	2981	56214	31479	7322
2018	3560	61976	34978	8136
2019	3977	72961	41868	11688
2020	4222	79958	46943	13870
2021	5459	87742	53460	15807

Compiled by: [5]

Table 3

The results of the assessment of the dependence of the GDP of Ukraine on the revenues received from the services provided in the field of telecommunications and postal communications, in particular, mobile communications and Internet services

Indicator	The scope of services provided in the field of telecommunications and postal communication	Mobile communication	Internet services
Regression coefficients	0,13	0,24	0,37
Correlation	-0,3283	-0,3189	-0,3202

The state information policy should be implemented step-by-step on the basis of using organizational, legal and economic mechanisms. The development and implementation of a national strategy of the information society development in Ukraine should direct the activities of executive power central authorities into the carrying out the state policy on information society development in Ukraine [4]. The state should ensure priority consideration of relevant legislative initiatives in order to create an integral legislative system on information society development. It is important to work on Ukraine's information legislation improvement, in particular in respect of bringing it in conformity to the rules in this area defined by international legal acts.

Ukraine's government should consider the chance of including tasks on information society development into international legal agreements on scientific and technical cooperation and international technical assistance, entrust Ukraine's National Academy of Science, Ukraine's Ministry of Education and Science, branch Academies of Science to make proposals on ensuring enhanced participation of Ukrainian scientists in international interdisciplinary research on information society issues and the introduction of new information and communication technologies [5]. An effective information policy should be based on the Concept of Ukraine's state information policy, which should carry normative character and be treated as a legal document. At the same time this concept should not become a "dead letter of the law", but, on the contrary, constantly evolve.

It is assumed that state information policy implementation will last for a quite long period, the terms of which are related with a certain development level of Ukrainian economy. This development speed is determined by the increase in information needs [6]. At the first stage of the state information policy implementation there should be consistent reforms of information production in the system of state authorities and administration in general, and at the second one – a gradual

convert of existing information resources into real material and spiritual benefits for country's population. Not the least reason for the crisis permanent state in Ukraine, especially in the sphere of political communication, is caused by a systemic factor – the state and characteristics of the existing telecommunication system [7]. In the process of transition from authoritarian and command relations to the relations based on the principles of openness, accountability, dialogue and trust, to create a communicative basis of such relations and maintain stable sustainable development, the restructuring of the telecommunication system should be built around the following stages:

- preserving a strong public information hierarchy and telecommunication system that will provide secure information environment formation;
- creation of access points to the telecommunication system for political structures (information and communication systems);
- creation of independent mass media to strengthen horizontal communication and ensuring the communicative process in the socio-political sphere;
- gradual decentralization of the telecommunication system.

The development of Ukraine's information infrastructure should be ensured by the creation and development of a national system of satellite communication, terrestrial and cable digital TV, acceleration of TV transition to digital broadcasting technologies, optimization of the use of radiofrequency resources intended for broadcasting [8]. It is necessary to speed up the work related to the development, creation and use of computer systems, the promotion of entrepreneurship development in the sphere of information and communication technologies, in particular formation of the system of administrative, legal and economic mechanisms to stimulate the demand for information products.

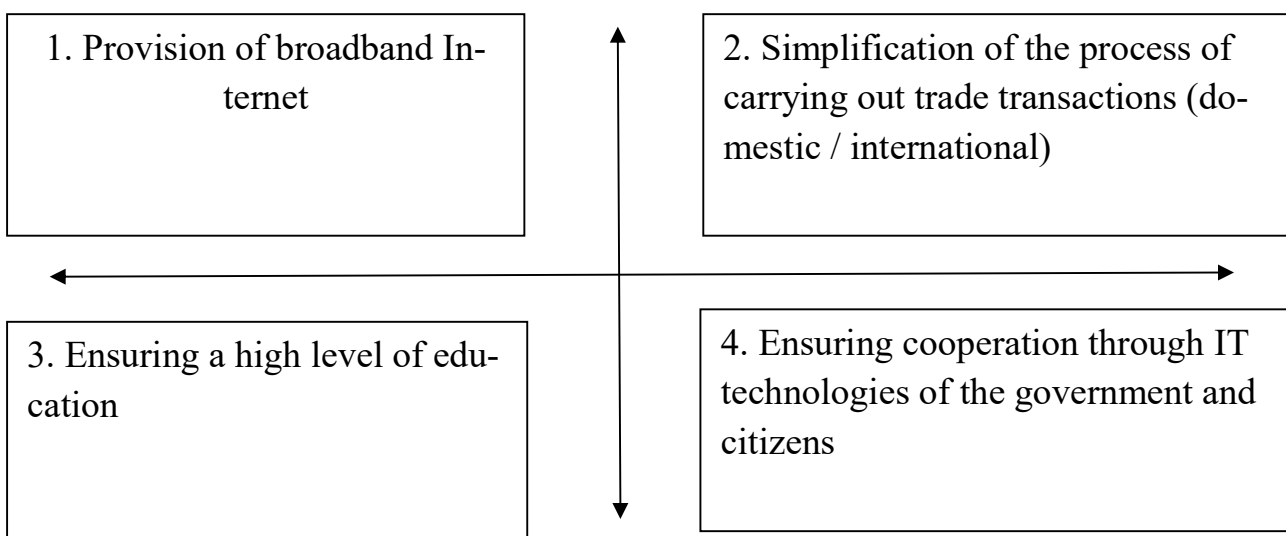


Fig. 2. Key factors promoting the development of the IT sector

One of the strategic directions of the state policy should be creation of public electronic information resources, having activated work on creation of public national electronic information resources, including scientific, technical and economic information in electronic form. This process supposes the development of offers on the legislative regulation of public relations connected with the protection of copyright in respect of works in electronic form in particular these ones stored in the Internet, and the development of typical regulations about the archives of electronic documents. It is necessary to approve the rules on obligatory storage of these documents by means of the development of digital libraries and preservation of Ukraine's cultural heritage by means of its electronic documentation and providing information placing of Ukraine's cultural institutions online. It is important to accelerate the development of a state program draft on the implementation of information and communication technologies in education and science spheres, providing measures on ensuring computer literacy of the population, creation of national research and education network, building a unitary digital scientific and educational space, centralized access to global electronic resources and integration into the world scientific and educational space. It is important to develop appropriate training curricula and scientific, technical, educational and methodical resources, in particular textbooks, manuals and methodical works and provide free public access to these information resources created at the expense of Ukraine's state budget.

The information policy basis should be information security guarantee [9], which should be based on improving the coordination level of executive authorities' activity on identification, assessment and forecasting of the threats to information security, prevention of these threats and providing eliminating of their consequences. It is necessary to develop a state program on combating computer crime, the development of infrastructure of the systems of cryptographic and technical information protection. It is necessary to improve the National system of confidential communication, to intensify the work on the development and introduction of modern high-speed means of cryptographic information protection into production, to increase the coordination efficiency of development and implementation of special equipment for telecommunication networks.

Conclusions and directions for further research.

At the current stage of information society development and formation it is necessary to investigate and study Ukraine's information area, to take specific measures on the information environment reestablishment and development and bringing national legislation in accordance with international norms. It is still important to solve the problem of providing access to telecommunication services by creating specialized business incubators, techno-parks, techno-polis, centers of high information technologies and other innovative structures with information and communication technologies. It is reasonable to provide all settlements of Ukraine with the Internet access opportunities by building a network of community access. It is necessary to define the strategy of universal telecommunication

services development, to create a universal service fund to provide the access to these services for the needy, to develop legal, financial and economic functioning mechanisms of the above-mentioned fund, ensuring the transparency of the mechanisms of radiofrequency resource allocation.

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