

Opportunities and Obstacles for the Development of the IT-Sphere in Ukraine: Economic and Legal Aspect

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The article is dedicated to the study of opportunities and obstacles of the IT-sphere development in Ukraine. The work mentions the authorities that regulate and control the subjects of the IT-sphere. The Laws of Ukraine, resolutions of the Cabinet of Ministers of Ukraine and other normative and legal documents which form the legal basis for the functioning of the IT-sphere are grouped in the article. The article identifies key economic and law issues that have a negative impact on the activities of IT-companies, IT-professionals and business partners, and also inhibits the development of IT-sphere in Ukraine. Such problems include lack of proper comprehensive protection of software product; difficulties in the process of transferring property rights to all IT-products; lack of legal instruments and mechanism for regulating issues related to non-competition in labor relationships; piracy during using software products. The author suggests possible ways of solving each of these economic and law problems of the IT-sphere in Ukraine. The first step in solving these problems is the specification of intellectual property of the IT-professionals and IT-companies work results in the law field. The implementation of this proposal will provide a good basis for further action. The next steps include improving the regulatory framework of Ukraine to ensure legal protection of software products and creating conditions for the simple, transparent and effective process of transferring property rights to IT-products. Having solved these indicated problems of an economic and legal nature, the IT-sphere in Ukraine will be able to fully realize its capabilities: save labor resources, i.e. highly qualified and creative IT-specialists who provide development and implementation of various IT-projects; expand the boundaries of international cooperation in the IT-space; create your own IT-products; develop IT-entrepreneurship in Ukraine, especially innovative.

Keywords: cybersecurity, IT-sphere, legal base of the IT-sphere, property rights to IT-products, the security of the software product.

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Problem statement. The rapid development of the IT-sphere provides new opportunities for IT entrepreneurs. However not only knowledge of new technologies and financial support for IT projects but also existing legal base that can reliably protect the results of the intellectual, especially innovation activity are essential for the formation and development of the business. The legislation of Ukraine is imperfect and has a range of conflicting or unsettled relationships that arise in the IT-sphere. In this regard, identification of key issues of the economic legal nature and opportunities for the development of the IT-sphere in Ukraine is an important and relevant area of research.

Review of recent studies, which address the same problem. Many scientists find the research of the IT-sphere really interesting. Thus, Bachinsky T. reveals such an important issue as the legal basis of the provision about the non-compete in the IT-sphere in Ukraine [1];

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Gafiyak A. and Kikot A. consider modern legislative reforms in the IT-sphere in Ukraine [2]; Koval M. identifies the main problems of the intellectual property rights to IT-products [3]; Diachenko V. analyses the software license agreement [4]; Klochkov V. defines the specificities of the state of the software of the IT-business in Ukraine [5] and others. However, the consideration of the legal base of the IT-sphere in Ukraine and the identification of key issues of the economic legal nature in this industry are outstanding tasks of the science sphere.

The goal of the article. The purpose of the article to identify the key issues of the economic legal nature of the IT-sphere in Ukraine and to find the possible ways of addressing them for the further development of this industry.

The main material. It is necessary to identify the governmental authorities that regulate and monitor the subjects of the IT-sphere for the consideration of the legal base of the IT-sphere in Ukraine. These are the E-government Agency; Department of Digital Economics; State Intellectual Property Service; Committee for Informatization and Communications of the Verkhovna Rada of Ukraine as well as the National Coordination Center of Cybersecurity as a permanent body of the National Security and Defense Council of Ukraine. The core functions performed by the governmental authorities are presented in the Fig. 1.

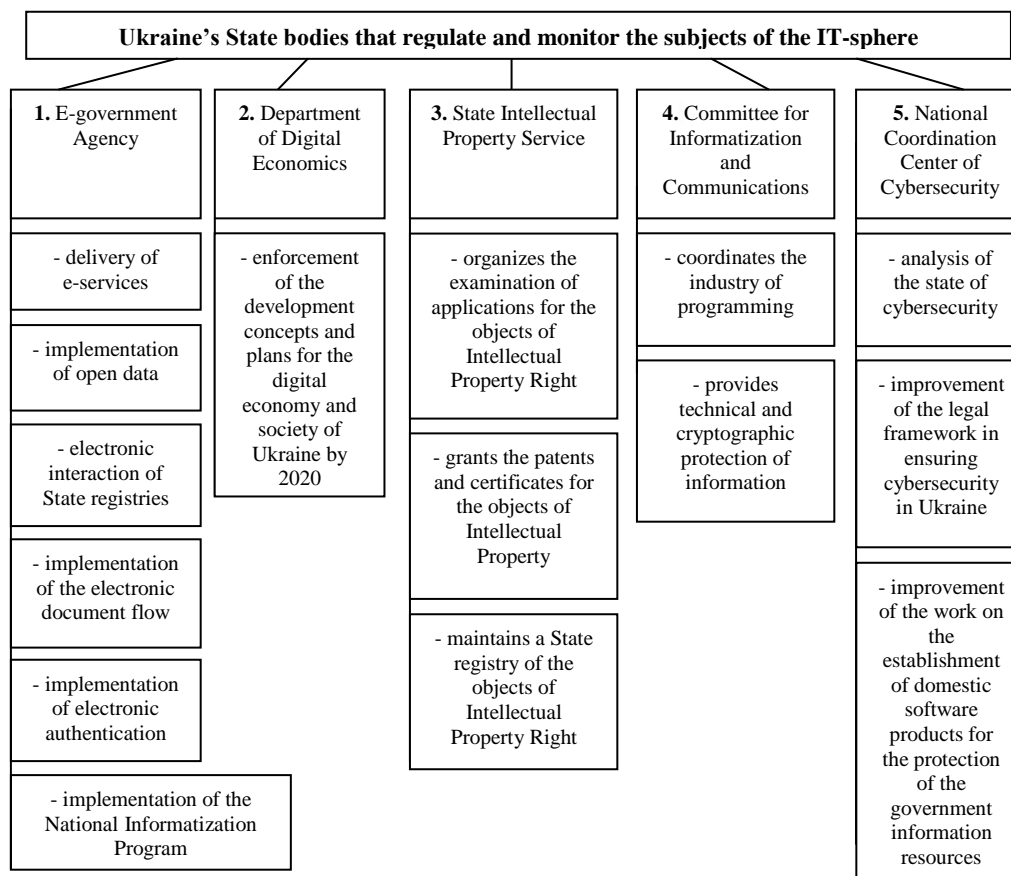


Figure 1. Core functions of active government authorities in the IT-sphere [structured by the author]

It should be noted that the Department of Digital Economics among the considered governmental authorities is temporary and runs until 2020.

The functioning of the subjects of the IT-industry depends on the relevant legal documents that form the legal base of the IT-sphere in Ukraine. The author grouped in chronological order the Laws of Ukraine and decisions of the Cabinet of Ministers of Ukraine that cover the IT-sphere (Table 1).

Table 1

Legal enforcement of functioning of the IT-sphere in Ukraine
[grouped by the author based on [5]]

The name of the legislation, date of adoption	The main issues that are regulated by legislation
<i>I. Laws of Ukraine</i>	
1. The Law of Ukraine “On Information” of 2 October 1992.	This Law governs the relations concerning creation, collection, obtaining, storage, use, distribution, protection, information protection.
2. The Law of Ukraine “On Copyright and Related Rights” of 23 December 1993.	This Law protects the personal non-property rights and property rights of authors and the related rights.
3. The Law of Ukraine “On Information Protection in Informational and Telecommunication Systems” of 5 July 1994.	This Law governs the relations in the field of information protection in information, telecommunication and information, and telecommunication systems.
4. The Law of Ukraine “About Distribution of Copies of Audiovisual Works, Soundtracks, Video grams, Computer Programs, Databases” of 3 March 2000.	This Law determines the legal basis of the distribution of copies of audiovisual works, soundtracks, video grams, computer programs, databases and is directed to the protection of interests of subjects of copyright and related rights and consumer protection.
5. The Law of Ukraine “On Protection of Personal Data” of 1 June 2010.	This Law governs the legal relations connected with protection and personal data processing, which are performed fully or partially using automated means.
6. The Law of Ukraine “On the Basic Principles of Ensuring Cybersecurity of Ukraine” of 5 October 2017.	This Law determines the legal and organizational basis of ensuring the protection of the vital interests of man and citizen, society and state, national interests of Ukraine in cyberspace, main objectives, the directions and the principles of state policy in the field of cyber security.
<i>II. The decisions of the Cabinet of Ministers of Ukraine</i>	
1. Decree of the CMU № 373 “On Approval of the Rules for Protection of Information in Informational and Telecommunication Systems” of 29 March 2006.	The rules define the general requirements and organizational principles of protection of the government information resources or information, requirements of data protection established by Law in informational and telecommunication systems.
2. Decree of the CMU № 265-p “On Approval of the Economic Activities that relate to the Creative Industries” of 24 April 2019.	The Government adopted the list of economic activities that relate to the creative industries. There are new media and information and communication technologies among them: the software, video games, digital technologies in the art (3D printing, virtual, augmented and mixed reality).
3. Order of the CMU № 67-p “On Approval of the Concept for the Development of the Digital Economy and Society of Ukraine for 2018-2020 and Adoption of the Plan of Measures for its Implementation” of 17 January 2018.	The concept includes the creation of new opportunities for the realization of human capital, development of innovative, creative and “digital” industries and companies; development of exports of “digital” products and services.

It is important to identify the key issues of the economic legal nature that have a negative impact on the activity of the IT companies and hamper the development of the IT-sphere in Ukraine (Table 2).

Table 2

The key issues of the economic legal nature of the IT-sphere
in Ukraine and possible ways of addressing them [identified by the author]

<i>Key issues</i>	<i>Possible ways of addressing them</i>
1. Lack of appropriate comprehensive software protection.	- to concretize the results of the intellectual property of the IT-sphere in the legal field; - to provide legal protection of software products through the legal and regulatory framework.
2. Difficulties in transferring property rights to all the IT-products.	- to provide the effectiveness and simplicity of the process of transferring property rights to all the IT-products by improving the Law of Ukraine "On Copyright and Related Rights".
3. Absence of legal instruments and mechanisms to regulate the problems related to the non-compete in employment relationships.	- to include a provision for the non-compete in the contracts for the programming and development of IT-products; - to develop and introduce the mechanism to regulate the problems related to the non-compete in employment relationships.
4. Piracy activities when using software products.	- to strengthen control by the State government bodies over the misuse of software products of IT-sphere; - strengthening responsibility for piracy.

Key problems of the IT sphere in the legal aspect:

1. Lack of appropriate comprehensive software protection. According to international and Ukrainian legislation software is an object of copyright and is protected as a literary work. To ensure the protection of software rights, the key role is played by license, user or distribution agreements. In these documents, such aspects must be specified: contract duration, method of the software using, the territory to which the transferred right extends, the amount and procedure of payment of royalties, and so on. At the same time, attention should be paid to the validity of the software copyright, which, according to the Law "About copyright and related rights", is 70 years, which is not relevant for rapidly developing information technologies and reflects the imperfection of the legislative framework of our country. Also, program codes deserve attention. If during the software development open program codes are used, the rights to this code belong to specific people, and they distribute the code under the conditions defined in the "open licenses". This means that the code of such software can be refined without the permission of the company, changed by any other people, provided that it is prohibited for them to restrict further access to the code of such software and receive commercial benefit from it [4].

2. Difficulties in transferring property rights to all the IT-products. The rights to IT products and the software seldom belong to the authors themselves (IT-professionals). The development of such products is produced with the resources of the company and during working hours, then the copyright belongs to an employer or to a third person (customer). Even while making a copyright agreement, the parties often forget to make a list of limited

transferred rights, and it leads to some problems while using software products. To solve them, the regulatory framework has to be improved.

3. Absence of legal instruments and mechanisms to regulate the problems related to the non-compete in employment relationships. This problem increases the risk of leak of company's important information.

4. Piracy activities when using software products. According to the Law of Ukraine "About copyright law and related rights", piracy in the sphere of copyright includes publishing, copying and distributing counterfeit copies of works (computer programs and databases are included). Unfortunately, mechanics of protection and fighting with piracy in Ukraine are imperfect and need specific actions from the side of the government and control departments.

The first step in addressing the problems is to specify the intellectual property of the results of the work of the IT-professionals and IT-companies in the legal field.

The implementation of the proposal will provide fertile ground for further action. The next steps include the improvement of the legal base of Ukraine for the provision of the legal protection of software products and the creation of the conditions for the effectiveness, transparency, and simplicity of the process of transferring property rights to IT-products.

Today, there are three real and effective ways to protect a software product from misuse:

1. Protect the program source code with copyright.
2. Ensure the protection of algorithms used in programs as methods for solving specific tasks.
3. Ensure the protection of the IT-product name by registering a trademark, the name of the program, database or website, its domain name. This method will reliably protect program or site name as a sign of goods and services in the IT-sector, as well as provide an opportunity to make a profit from the issued legitimate usage of this mark by others.

The economic aspects of the considered IT issues are:

1. The failure to receive profits from IT-products development because of the property rights transfer complexity.
2. Increased degree of risk for IT-companies because of the lack of legal tools and mechanisms for regulating problems, related to non-competition among labor relationships.
3. Expansion of the shadow sector of the economy and the shortfall of funds in budgets because of the piracy activities development on IT-products.
4. The outflow of intellectual capital (high-class IT-professionals with their developments) to more progressive countries.
5. Low level of purchasing power in Ukraine. If a small IT-company seeks to launch a product for mass consumption, it is most logical to do this in English and on large marketplaces such as the Play Market or AppStore (which we don't have in our country), which makes the development of innovative IT entrepreneurship slow.

Having solved these indicated problems of an economic and legal nature, the IT-sphere in Ukraine will be able to fully realize its capabilities:

- save labor resources, highly qualified and creative IT-specialists who provide development and implementation of various IT-projects.
- expand the boundaries of international cooperation in the IT space.
- create your own IT-products.
- develop IT entrepreneurship in Ukraine, especially innovative.

Conclusions. The introduction of actions proposed in the article can address certain key issues of the economic legal nature that have a negative impact on the activity of the subjects

of the IT market. It can also improve the relevant legal documents and mechanisms in order to create favourable conditions for the development of the IT-sphere in Ukraine.

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Возможности и препятствия для развития ИТ-сферы в Украине: экономико-правовой аспект

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Статья посвящена исследованию возможностей и препятствий развития ИТ-сферы в Украине. В работе определены органы государственной власти, осуществляющих регулирование и контроль субъектов ИТ-сферы. В статье сгруппированы Законы Украины, постановления Кабинета Министров Украины и другие нормативно-правовые документы, формирующие правовую базу функционирования ИТ-сферы. В работе определены ключевые проблемы экономико-правового характера, которые негативно влияют на деятельность ИТ-компаний, ИТ-специалистов и бизнес-партнеров, а также тормозят развитие ИТ-сферы в Украине. К таким проблемам отнесены: отсутствие надлежащей комплексной охраны программного продукта; сложности в процессе передачи имущественных прав на все ИТ-продукты; отсутствие правовых инструментов и механизма для регулирования вопросов, связанных с неконкуренцией в трудовых отношениях; пиратская деятельность при использовании программных продуктов. Автором предложены возможные пути решения каждой из указанных проблем экономико-правового характера ИТ-сферы в Украине. Первым шагом в решении указанных проблем является конкретизация в правовом поле интеллектуальной собственности результатов работы ИТ-специалистов и ИТ-компаний. Реализация этого предложения станет благоприятной почвой для

дальнейших действий. Следующие шаги предусматривают совершенствование нормативно-правовой базы Украины для обеспечения правовой защиты программных продуктов и создание таких условий, чтобы процесс передачи имущественных прав на ИТ-продукты был простым, прозрачным и эффективным. Решив обозначенные проблемы экономико-правового характера ИТ-сфера в Украине сможет в полной мере реализовать свои возможности: сохранить трудовые ресурсы, т.е. высококвалифицированные и креативные ИТ-специалисты, которые обеспечивают разработку и реализацию разнообразных ИТ-проектов; расширить границы международного сотрудничества в ИТ-пространстве; создавать собственные ИТ-продукты; развивать в Украине ИТ-предпринимательство, особенно инновационное.

Ключевые слова: кибербезопасность, ИТ-сфера, правовая база ИТ-сферы, имущественные права на ИТ-продукты, охрана программного продукта.

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**Можливості та перешкоди для розвитку ІТ-сфери в Україні:
економіко-правовий аспект**

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Стаття присвячена дослідженню можливостей та перешкод розвитку ІТ-сфери в Україні. В роботі визначені органи державної влади, які здійснюють регулювання та контроль суб'єктів ІТ-сфери. У статті згруповано Закони України, постанови Кабінету Міністрів України та інші нормативно-правові документи, що формують правову базу функціонування ІТ-сфери. В роботі визначено ключові проблеми економіко-правового характеру, що мають негативний вплив на діяльність ІТ-компаній, ІТ-фахівців та бізнес-партнерів, а також гальмують розвиток ІТ-сфери в Україні. До таких проблем віднесено: відсутність належної комплексної охорони програмного продукту; складності у процесі передачі майнових прав на усі ІТ-продукти; відсутність правових інструментів та механізму для регулювання питань, пов'язаних з неконкуренцією у трудових відносинах; піратська діяльність при використанні програмних продуктів. Автором запропоновано можливі шляхи вирішення кожної з зазначених проблем економіко-правового характеру ІТ-сфери в Україні. Першим кроком у вирішенні зазначених проблем є конкретизація у правовому полі інтелектуальної власності результатів роботи ІТ-фахівців та ІТ-компаній. Реалізація цієї пропозиції стане сприятливим підґрунтям для подальших дій. Наступні кроки передбачають удосконалення нормативно-правової бази України для забезпечення правового захисту програмних продуктів та створення таких умов, щоб процес передачі майнових прав на ІТ-продукти був простим, прозорим та ефективним. Вирішивши означені проблеми економіко-правового характеру ІТ-сфера в Україні зможе в повній мірі реалізувати свої можливості: зберегти трудові ресурси, тобто висококваліфіковані та креативні ІТ-фахівці, які забезпечують розробку та реалізацію різноманітних ІТ-проектів; розширити межі міжнародного співробітництва в ІТ-просторі; створювати власні ІТ-продукти; розвивати в Україні ІТ-підприємництво, особливо інноваційне.

Ключові слова: кібербезпека, ІТ-сфера, правова база функціонування ІТ-сфери, майнові права на ІТ-продукти, охорона програмного продукту.

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