THE APPROACHES TO DEFINE «BIG DATA» AND REGULATION OF «BIG DATA» ON THE EXAMPLE OF LEGISLATION OF UK

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ABSTRACT

The concept of "Big Data" is not identified either in Uzbek legislation or in civil law doctrine. The issues of forming a unified approach to understanding this phenomenon, its essential features, as well as tools for proper collection and processing are considered mainly within the framework of technical and natural sciences.

Given that the analysis of activities related to Big Data is overwhelmingly carried out in terms of economic indicators and technical potential, the study of these issues from a legal point of view, identifying the degree of preparedness of the Uzbek legal framework and the legal association is necessary and reasonable

Keywords: Big Data, Information, digital asset, digital right, technology, database software tools, complex nature of BigData, processing of Big data.

АННОТАЦИЯ

Понятие «Big Data» не определено в законодательстве Узбекистана, в гражданско-правовой доктрине. Вопросы формирования единого подхода к пониманию этого явления, его сущностных признаков, а также инструментов правильного сбора и обработки рассматриваются в основном в рамках технических и естественных наук.

Учитывая, что анализ деятельности, связанной с большими данными, в подавляющем большинстве случаев осуществляется с точки зрения экономических показателей и технического потенциала, изучение этих вопросов с правовой точки зрения, выявление степени готовности узбекской правовой базы и юридического объединения является актуальным. необходимо и разумно

Ключевые слова: большие данные, информация, цифровой актив, цифровое право, технология, программные средства баз данных, комплексный характер больших данных, обработка больших данных.

INTRODUCTION

In judicial practice there is no unified approach to the phenomenon under consideration, for example, its content, use.

The object of the study is the relationship that arises about Big Data.

The subject of the study is a set of issues related to the legal and doctrinal definitions of Big Data, their place in the system of objects of civil rights, as well as possible and existing legal models for regulating the new phenomenon. The purpose of the study is to study insufficiently developed problems related to the definition of the legal nature of Big Data, their legal regime and its features, including international experience in regulating the area under consideration. The methodological basis of the study was made up of both general scientific and particular scientific methods of cognition: analysis and synthesis, induction and deduction, systemic, logical, dialectical, structural-functional, formal-legal methods, and others.

Big data (hereinafter - BigData) is a relatively new phenomenon for the modern world, and therefore it is possible to establish the source of the appearance of this term. In the scientific literature, the introduction of the concept of "Big Data" into wide use is associated with its use by Clifford Lynch in the British scientific journal Nature, published on September 3, 2008, where, among other things, the significance of the emerging new paradigm was discussed: "How can technologies that open up work opportunities affect the future of science with large amounts of data?[1]. However, there are many works that used this term long before the release of this article, describing the features, methods and ways of analyzing BigData[2].

DISCUSSION AND RESULTS

BigData is gaining momentum in popularity every year, attracting the attention of many scientists. By 2011, Microsoft and IBM began to use BigData in their projects, which further fueled interest in the new phenomenon. Already by 2013, universities began to introduce Big Data as a separate subject, which once again emphasizes the need to study the emerging phenomenon.

The rapid spread of Big Data undoubtedly makes us think about the need to develop not only technical methods of regulation, but also about the legal aspects of regulation. Unfortunately, the legal form does not always keep pace with the pace of

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[1] Chernyak L. "Big data" - a new theory and practice // Open Systems. No. 10. 2011; Korneev M.S. The history of the concept of "Big Data" (BigData): dictionaries, scientific and business periodicals // Bulletin of the Russian State University for the Humanities. 2018; Tsarkova N.I., Smolyanov A.S. BigData. Development, analysis and technology // Actual problems of the humanities and natural sciences. No. 7-1. 2016.

[2] John R. Mashey. Big Data and the Next Wave of InfraStress. 1998. URL: https://www.usenix.org/conference/1999-usenix-annual-technical-conference/big-data-and-next-wave-infrastress-problems (Accessed 09/03/2018); MichaelCox. David Ellsworth. Application-controlled demand paging for out-of-core visualization // Proceedings of the IEEE 8th conference on Visualization. October 1997. URL: https://www.nas.nasa.gov/assets/pdf/techreports/1997/nas-97-010.pdf (accessed 09/03/2018); Lyman, Peter, Hal R. Varian. "How Much Information". 2003. URL: http://groups.ischool.berkeley.edu/archive/how-much-info-2003/ (accessed 03.09.2018).

progress in the information environment. The improvement of BigData is no exception. Due to the complexity of the procedure for modifying the legal system, formalism in the legal regulation of the sphere under consideration should be avoided. Therefore, at the first stage of developing the regulatory framework for a new phenomenon, it is necessary to create a "framework" legal structures that would establish a general regulation procedure (concepts, principles, etc.) for flexible adaptation to constant changes in the innovation sphere, and would become the basis for creating sectoral legislation in future. Therefore, first of all, it is necessary to develop basic legal concepts, which leads to the need to determine the nature of BigData. Similar can be found in V. A. Vaypan, who divides the development of the digital economy into stages, where the initial one was the formation of fundamental legal concepts and institutions.[3]

In the literature, attempts have been repeatedly made to formulate a definition of BigData, however, there is no uniform approach to the concept under consideration today.

Thus, in the 2011 Report "Bigdata: The next frontier for innovation, competition, and productivity", McKinsey Global Institute specialists presented a definition of BigData as a dataset whose size exceeds the capabilities of using traditional database software tools for their collection, storage, management and analysis, however, such a definition is subjective and emphasizes exactly the size of the data that could fit under BigData[4].

Others define Big Data as a set of technologies that perform several operations: processing large data volumes than in the traditional sense, working with continuously incoming, structured or unstructured data in parallel in different aspects[5].

Still others point to the complex nature of BigData, which includes both the data itself and the set of technologies associated with the processing of this data[6].

Summarizing the many opinions regarding the essence of BigData, we can distinguish three approaches to its definition: 1) as information, 2) as a technology, or 3) as a complex institution, including both the information itself and the technology for its processing. Let's consider these approaches in more detail.

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[3] Vaypan V.A. Fundamentals of legal regulation of the digital economy // Law and Economics. No. 11. 2017. P. 8.
[4] Manyika J., Chui M., Brown B., Bughin J., Dobbs R., Roxburgh C., Byers A. H. Big data: The next frontier for innovation, competition, and productivity //McKinsey Global Institute. 2011. URL: https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/big-data-the-nextfrontier-for-innovation (accessed 12/12/2018).
[5] Protasov S. What is Big Data? // PostNauka. URL: https://postnauka.ru/faq/46974
[6] Guseva A. A. "Big data": concept, sources, opportunities // Master's journal. No. 1. 2016.

The first approach is based on the fact that BigData is a technology[7]. It is worth noting here that the world practice refuses to define BigData as a technology, indicating under this term only the object of analysis, that is, the data itself, which is more logical[8]. The arguments refuting the expediency of considering BigData as a technology can be given as follows.

The first and most obvious argument is the very name of the phenomenon - "Big Data" or "Big Data", which clearly describes its essence. At the same time, according to the Interstate Standards for Automated Systems, information technologies include "techniques, methods and methods for using computer technology in the performance of the functions of collecting, storing, processing, transmitting and using data"[9].

Secondly, the features inherent in any technology do not coincide with the content of Big Data, among which, among others[10]:

1. the existence of algorithmic processes and the possibility of their control;
2. the presence of an internal operational structure;
3. use of specific methods and mechanisms in technological processes;
4. the presence of a goal and a focus on achieving it.

Thirdly, in the world of information technology, there are well-established terms that just define data processing technologies, that is, the very process of its analysis and structuring, such as "datamining" (data mining), "machine learning" (artificial intelligence, aimed at developing self-learning programs), "deep learning" (a type of machine learning that creates more complex and independent learning programs), etc[11].

Thus, we believe that the essence of the technology does not correspond to the nature of Big Data, but is precisely a tool for processing them and obtaining a certain result. In our opinion, it would be more correct to use the term "Big Data analytics"

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[7] Tolstova Yu. N. Sociology and computer technologies. Sotsiologicheskie issledovanija. No. 8. 2015; Volkova Yu. S. Big data in the modern world // Scientific and methodological electronic journal "Concept". T. 11. 2016. Bulgakova E. V., Bulgakov V. G., Akimov V. S. The use of "big data" in the public administration system: conditions, opportunities, prospects //

[8] Big data // European Commission. URL: https://ec.europa.eu/digital-single-market/en/big-data (Accessed: 12/14/2018); Snijders C., Matzat U., Reips U.-D. 'Big Data': Big gaps of knowledge in the field of Internet // International Journal of Internet Science. #7: 1–5. 2012. URL: http://www.ijis.net/ijis7_1/ijis7_1_editorial.pdf (accessed 12/14/2018).

[9] GOST 34.003-90. Automated systems. Terms and Definitions. URL: http://docs.cntd.ru/document/gost-34-003-90 (date of access: 12/14/2017).

[10] Levin V.I. History of information technologies. M.: 2007. S. 33.

[11] Stepanov R. G. Data Mining Technology: Data Mining. Kazan, 2008; FlachP. Machine learning // DMKPress. Moscow, 2015; Deng L., Yu D. Deep Learning: Methods and Applications // Foundations and Trends in Signal Processing. №7(3—4):1. 2014.URL: https://www.nowpublishers.com/article/DownloadSummary/SIG-039 (accessed 12/14/2018).

when talking about technologies and processes for using Big Data (collection, storage, processing, use of results, etc.).

The second approach comes from the fact that BigData is a large array of data[12].

For Big Data, there are also traditional signs that, in our opinion, most successfully determine the essence of the content of the phenomenon under consideration within the framework of this approach.

The first author to present signs of a developing phenomenon was the American analyst Douglas B. Laney in 2001. In his article, he identified three main features that can characterize Big Data: 1) a large volume (Volume), 2) heterogeneity (Variety) and 3) speed of transformation (Velocity). Collectively, they were called "three" V "(3Vs)[13]. Later, as development progressed, specialists identified additional features that may be inherent in Big Data, in particular, data value (Value) and data reliability (Veracity)[14]. Let's take a look at these features in more detail.

1. The first sign - a large volume (Volume), comes from the very concept of "BigData". The information flow in the virtual space is growing exponentially. With the advent of the Internet, those processes of social life that previously existed in the real world began to flow into the online environment, which made them more accessible and efficient. Buying goods, communicating in social networks, the activities of enterprises and organizations in various fields - all these operations leave an information trail, creating a huge array of digital information. The continuous growth in the number of data collection sources, as well as the increase in the volume of data warehouses, causes the emergence of BigData[15]. Let's take a look at these features in more detail.

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[13] Laney D. 3-D Data Management: Controlling Data Volume, Velocity and Variety // Application Delivery Strategies. META Group. February 6, 2001. URL: https://blogs.gartner.com/doug-laney/files/2012/01/ad949-3D-Data-Management-Controlling-Data-Volume-Velocity-and-Variety.pdf (accessed : 09/16/2018).

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[15] Paulo B. Goes. Design science research in top information systems journals // MIS Quarterly: Management Information Systems. No. 38(1). 2014. URL: file:///C:/Users/Acer%20Aspire/Downloads/edcommentsv38n1.pdf (accessed 09/16/2018).

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2. The second sign - data heterogeneity (Variety), follows from the first and consists in the diversity of data. As mentioned above, since the number of processes performed in the online environment is growing every year, the volume of information is also increasing. However, each perfect process can contain many types of data that are collected into a single unstructured mass of information. For example, any social network contains all the personal information about a person that he wished to provide. What's more, a single enterprise can contain thousands of different pieces of information, ranging from employee information to industrial data. The complexity of systematization and further processing of such data by traditional ("manual") methods lies in the heterogeneity of their semantics, incompatibility of formats during collection, limited storage resources, and much more. However, speaking of BigData, one should not be limited to the presence of only heterogeneous data. The incoming information can often be quite systematized, uniform in nature, which does not require large capacities for its structuring, but has a fairly large volume[17].

Due to the heterogeneity of BigData, they should be divided into three large groups[18]:

i) Custom big data. This category of data is created directly by the person himself in the process of using various platforms on the Internet, as well as other means that record human behavior (geolocation data, data from social networks, video files, etc.).

ii) Industrial big data. Information of this type, as a rule, is generated not by a person, but by various technologies used in industry and other industries (sensors and sensors in an enterprise, video recorders, etc.)

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[16] Laney D. 3-D Data Management: Controlling Data Volume, Velocity and Variety. P.2.
[17] Laney D. 3-D Data Management: Controlling Data Volume, Velocity and Variety. P.2.
[18] Savelyev A. I. Big Data Regulation and Privacy Protection in New Economic Realities. S. 124.
An alternative classification is given by M. A. Rozhkova, who divides sources into technical and social. (See: Rozhkova M. A. What is big data (big data), how do they differ from regular data and what is the problem of legal regulation of big data // Zakon.ru. 2019. URL: https://zakon.ru /blog/2019/04/22/chto_takoe_bolshie_dannye_big_data_chem_oni_otlichayutsya_ot_obychnyh_dannyh_i_v_chem_sos toit_proble (accessed 04/22/2019).

iii) Anonymous big data. This category includes a set of data that does not contain personal identifiers of the subject, using which it is impossible to identify a specific individual without additional information.

3. The third sign - the speed of transformation (Velocity), is a consequence of the two previous ones and consists in the high speed of creating and modifying data. Taking into account a large amount of uniform or heterogeneous information, the situation is aggravated by its constant updating, which traditional database analysis approaches are not able to effectively cope with[19].

4. The fourth sign - value (Value), consists in the fact that not only the collected data in a raw, "raw" form, but also the result obtained after their processing, have value[20]. That is, by connecting at first glance "incompatible" data sets, analysts can get a completely unpredictable result for themselves. In view of this, for most organizations, the true benefit of having data appears after it has been systematized and obtained the necessary results, combining heterogeneous data. Many authors note that "the true value of data is like an iceberg in the ocean. At first glance, only a small part of them is visible, while everything else is hidden under water[21].

5. The fifth sign is reliability (Veracity). As mentioned above, after processing information, it receives a certain value. Going deeper, it should be said that the value of the processed information also lies in the reliability of the data received. This raises the question of how reliable the sources from which the data were obtained, and subsequently, how true the results generated from such data will be[22]. In addition, this feature is closely related to the aforementioned "Velocity" feature, since Big Data volatility is often uncontrollable, which leads to a natural loss of actualization and, accordingly, data reliability. The loss of a potentially necessary result can be considered a consequence of the unreliability of the data.

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[19] Foreign experts express an interesting idea, saying that "with the traditional approach to data analysis (preparation of reports based on accumulated data), an attempt was made to analyze the past in order to take an action in the future, while Big Data analysis involves analyzing the present, to change the current situation." (See: Davenport T., Barth P., Bean R. How 'Big Data' Is Different // MIT Sloan Management Review 54, no. 1. 2012. URL: http://sloanreview.mit.edu/article/ how-big-data-is-different/ (date of access: 10/26/2018)).

[20] A similar idea is given in their work by Sergeev A.P. and Tereshchenko T.A. 117).

[21] Mayer-Schenberger V., Kukier K. Big data. A revolution that will change the way we live, work and think. M.: Mann, Ivanov and Ferber Publishing House, 2014. P. 111.

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REGULATION OF BIG DATA ON THE EXAMPLE OF LEGISLATION OF UK

Most states, realizing the growing importance of global digitalization, one way or another embarked on the path of legal regulation of the virtual world by defining the main institutions, their legal principles and protection mechanisms. Of course, the active development of the legal framework is also taking place in relation to Big Data, being a key link in the digital chain, however, since its inception, it has not yet acquired an adequate legal regime.

Going beyond national regulation and the need to study foreign experience in the legal regulation of the analyzed phenomenon is determined by the presence of its extraterritorial nature. The turnover of a huge amount of data goes beyond the boundaries of one country, which requires unified regulation both at the international and national levels, ignoring which leads to legal uncertainty for all participants in the market turnover and inhibition of the development of the digital economy.

Therefore, instead of introducing local norms within the framework of one legal system, it is advisable to take into account the experience of international law-making in the area under study, use uniform provisions and include universal norms in domestic legislation to create an effective digital legislation harmonized with the world community, otherwise Uzbekistan risks falling out of the international economic turnover.

For the analysis of foreign practice, countries were taken that use two different legal approaches in the legal regulation of Big Data: 1) a restrictive regulation model within the framework of personal data legislation (Great Britain), 2) and a free regulation model (USA).

The first country that follows the path of establishing legal regulation and introducing BigData into the national system is the United Kingdom.

Preparations for the formation of legal norms for the regulation of BigData began in 2013, when the UK Government declared BigData a key technology of critical importance to the United Kingdom[23].

Consideration of the legal regulation of this area should start with the Report on Big Data Technologies and National Security: Comparing International Perspectives on Strategy, Policy and Law (UnitedKingdomReport: BigDataTechnologyandNationalSecurity.

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[23] Bart van der Sloot, Sascha van Schendel. International and comparative legal study on Big Data // The Netherlands Scientific Council for Government Policy. P.57. URL: https://www.wrr.nl/binaries/wrr/documenten/working-papers/2016/04/28/international-and-comparative-legal-study-on-big-data/WP020-International-Comparative-Legal-Study-Big-Data.pdf

ComparativeInternationalPerspectivesonStrategy, PolicyandLaw)[24], which indicated that at the moment British legislators aim to amend on clarifying the legal regulation of Big Data specifically in data protection legislation[25], which reflects the general trend in the development of this area precisely within the framework of data privacy legislation, giving priority to the principle of privacy.

In the absence of special rules or regulations that would directly regulate activities in the field of Big Data, the UK, today, uses an indirect approach to the legal regulation of this area through existing legislation, which in one way or another affects the use of a certain category of information.

The first category includes personal data that is governed by the General Data Protection Regulation (hereinafter referred to as the GDPR)[26], as well as the Data Protection Act 2018[27], which supplements the main provisions of the GDPR and regulates areas that are outside the jurisdiction of this document (for example, national security). Both acts quite strictly regulate the process of collecting and processing personal data, setting high standards of protection, as well as serious sanctions for violation, for example, of provisions prohibiting the sale or offer for sale of illegally collected personal data without the consent of the subject.

In addition to the two legal acts presented above, there are a number of other documents regulating the processing of certain data in the field of health, media (Telecommunications Law 1984 and Broadcasting Law 1996), security (Police Law 1997), etc.[28].

Further, as part of the consideration of the legal experience of the UK, it is impossible to ignore the very significant document of the European Commission from 2017 - "Building the European Data Economy"[29], where two significant conclusions were made.

Firstly, the paper presented for the first time touched upon the issue of the legal regime of machine-generated industrial data. Thus, it was proposed to introduce a

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[24] Bennett Moses L;De Koker L;Mendelson D. Big Data Technology and National Security: Comparative International Perspectives on Strategy, Policy and Law – United Kingdom Report. June 2018.
URL: https://www.d2dcrc.com.au/m/u/2018/08/30/uk-report-june-2018.pdf
[25] Bennett Moses L; De Koker L; Mendelson D. Big Data Technology and National Security: Comparative International Perspectives on Strategy, Policy and Law – United Kingdom Report. P.58.
[26] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation). URL: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R0679
[27] Data Protection Act 2018. URL: http://www.legislation.gov.uk/ukpga/2018/12/contents/enacted
[28] Bart van der Sloot, Sascha van Schendel. International and comparative legal study on Big Data. P.60.
[29] Communication on Building a European Data Economy // European Comission. 2017. P. 13. URL: https://ec.europa.eu/digitalsingle-market/en/news/communication-building-european-data-economy

new subject - the "creator of industrial data", which is the owner of the equipment that generates data, or owns the equipment on a different basis. As a result, it was proposed to assign a new "data producer right" to such a subject, which would establish the possibility of using raw information, as well as granting others access to use the data[30].

Secondly, the proposal on the possibility of granting access to any person to the personal data of third parties in return for the specified remuneration, based on the principles of reasonableness, fairness and proportionality, by analogy with the free use of an intellectual property object without the consent of the copyright holder, but with the payment of a certain rewards .

Special regulation is established for a large set of cookies[31] that do not require the user's consent to collect and process them, if they do not include confidential information, are used for user statistics, are aimed at improving the operation of the Internet resource, etc[32].

CONCLUSION

Thus, in the UK there is a general need to update outdated laws that reflect the existing reality and take into account the peculiarities of new types of data. At the same time, UK legislators do not hide and recognize that the legal regulation related to Big Data is at the initial stage of its development, and therefore, a certain self-regulation of this area is revealed, which consists in creating special recommendations on the ethical use of Big Data at the level of individual organizations[33].

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[30] Communication on Building a European Data Economy // European Comission. 2017. P. 13.

[31] A cookie is a small amount of text data transmitted from a web server to a web browser, which is usually used to: 1) authenticate the user, 2) save the user's personal preferences and settings, 3) maintain user statistics, etc. Bittersweetcookies. Some security and privacyconsiderations // European Network and Information Security Agency. 2011. P. 2-3. URL: http://ifap.ru/pr/2011/n110221b.pdf

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