

ECONOMIC SECURITY OF THE STATE AND ECONOMIC ENTITIES

UDC 657.012.32
JEL M41

DOI: 10.26906/EiR.2023.3(90).3037

INFORMATION SPACE OF CONTROLLING INFORMATION IN THE CONTEXT OF JOINT ACTIVITIES: ECONOMIC SECURITY ASPECT

Dmytrenko Alla*, Doctor of Economic Sciences, Associate Professor,
Senior Lecturer at the Department of Finance, Banking and Taxation
National University "Yuri Kondratyuk Poltava Polytechnic"

*ORCID 0000-0003-3304-8652

© Dmytrenko A., 2023

*Стаття отримана редакцією 31.07.2023 р.
The article was received by the editorial board on 31.07.2023*

Introduction. Deepening the scientific basis for studying the peculiarities of the creation and circulation of financial controlling information in the course of joint activities requires studying the essence and defining the content of such categories as "information space" and "information space of controlling information", identifying the main centres for the creation of controlling information in the joint venture management system, as well as identifying and classifying types of controlling information and justifying the determination of the required volume and quality of such information. In the scientific literature, two similar concepts are distinguished – "single information space" and "information space".

The emergence and intensification of threats in the information sector significantly increases the importance and role of information security for the national security of Ukraine and expands the content and relevance of the chosen research topic.

Analysis of recent research and publications. In the sources [9–11, 14; 15] shows that scientists consider the single information space as a set of databases and data banks, technologies for their maintenance and use, information and telecommunication systems and networks, which operate on the basis of common principles and according to common rules, ensuring information interaction between enterprises and their counterparts, as well as satisfaction of their information needs.

Objectives of the article. The purpose of the study is to consider the security system of the information space of controlling information in the implementation of joint activities and to increase the effectiveness of ways to combat the threat of information in the joint venture management system.

The realisation of this goal required the formulation and solution of the following research objectives: to determine the role and identify areas for improving information support in increasing the effectiveness of financial control of joint ventures; to develop conceptual provisions for improving the efficiency of the circulation of controlling financial information in the implementation of joint activities; to substantiate the need to ensure additional economic security of the country's information space by analysing information capacities.

The main material of the study. Information support as a basis for management decisions can be considered one of the main determinants of the competitiveness of business entities. At the same time, the rapid development and transformation of the digital environment, along with its undoubted benefits, has led to an increase in risks and threats in the information space [1].

The organisational aspect of the information space structure consists of a set of databases, data warehouses, technologies for their maintenance and use, information systems, networks, applications and organisational structures. They operate on the basis of certain principles and rules and ensure the information interaction of objects.

The technological and organisational elements of the information space include the information infrastructure, i.e., the environment that enables the collection, transmission, storage, automated processing and dissemination of information in society. The information infrastructure is formed by a combination of: information and telecommunication systems and communication networks, the industry of information, telecommunication and communication means; systems for creation and preservation of information resources; systems for providing access to information and telecommunication systems, communication networks and information resources; the information industry and the market of information services; systems of personnel training and scientific research; algorithms and software tools that ensure the functioning of software and hardware platforms, etc.

The analysis of the essence of the concepts of "single information space" and "information space", its elements and organisational components of the information infrastructure allows to allocate directions of research of the information environment of financial controlling in joint ventures within this section, namely:

- Studying the essence and defining the content of the category "information management space";
- analysis of the information space of controlling information and its organisation in the management system and financial controlling system of the joint venture;
- identification of the main centres for the production of controlling information in the joint venture management system;
- identification and classification of types of management information and its properties;
- substantiation of qualitative and quantitative characteristics of controlling information;
- justification for determining the required amount of control information depending on the organisational structure of the joint venture;
- development of information flows depending on the organisational structure of the joint venture, its size and activities;
- development of a package of methodological support and reporting forms to improve the quality of financial data collection and its further use.

In order to study the issue of defining the information space of controlling information, the main functions and tasks of financial controlling and its information support were studied in detail, which allowed to outline its main components and to develop the author's own definition of this concept. The article offers the author's own interpretation of the concept of "information space of controlling information": a single environment for circulation of data on various components of development of an economic entity, in which there are separate centres for production of such data and functioning technical and relevant information systems for their analysis and transfer to management for making management decisions. On the basis of the research conducted, it is proposed that the author's own definition of the concept of "controlling financial information" is as follows: "A set of various data on the financial activities of an enterprise and its performance, produced by various structural units of a joint venture entity, for the purpose of preparing analytical and informational support for management decisions in the field of joint venture financing."

Information is defined as a set of diverse data produced in certain departments of business entities by certain specialists, which allows to make a decision on how to organise the production of goods or services more efficiently and profitably in an economic context [2]. Accordingly, the combination of available knowledge and information becomes the company's strategic resource, on the protection of which economic interests depend [3].

As a result, it is possible to define the concept of "financial controlling information" as a set of diverse data produced by individual structural units of business entities, government agencies, other institutions and organisations and used in the process of preparing reports for managers at various levels in order to make the right management decisions. Financial controlling information is a complex concept, as it characterises the data generated within the management system of certain objects.

Therefore, it can be concluded that the enterprise information space system is a separate system, but it is related to the management system and the financial control system. However, a characteristic feature of a joint venture is that the information structure of the joint venture is more complex, as it involves the formation of the information space of each joint venture participant and the information space and information flows between the joint venture participants.

It is impossible to ignore the office threats to the information of business entities, namely the threats to the information contained in documents and information that office workers possess and use in the course of their work. To define the meaning of the concept of office management, it can be defined as "a set of actions of the personnel of a certain business entity, organised in space and time, aimed at ensuring the management of its activities". Since management is largely related to information technology, office activities are aimed at performing various tasks, works, procedures and operations of information support of the management process. The structure, methodology and content of such support are determined by the so-called office technology. The object of the latter is the relevant information resource that is processed, interpreted and used to support management activities. Thus, it can be seen that the basis of office activities is work with information of a business entity and work in the management link, which determines the special importance of such activities.

The main components of office activities are the knowledge of office employees and the documents that accompany it. In such circumstances, the efforts of those seeking to obtain information about companies or to damage the public perception of their activities will focus on staff and documents. Implementing a plan to obtain proprietary information through employees can pose a real threat to both staff and the business. The principal threats in this context are the involvement of employees and third parties, and office employees being blackmailed in order to access office information resources [12]. These threats frequently lack material value, and individuals are not always aware that the disclosure of information occurred due to their own fault. Companies must document the activities of business entities that create additional risks to information security [4].

The following threats to office information may occur: loss or improper destruction of documents; disregard for the requirements of administrative staff for the preparation, implementation, accounting, transfer and storage of documents; manipulation of restricted documents by persons who do not have access to them, unauthorised transfer of such documents to an unauthorised person; use of restricted information in unpublished documents, publications and personal files; placing redundant information in documents with restricted access; making copies of official documents, confidential documents and confidential documents in excess of the amount necessary for the performance of official duties; interpreting the document in the message (including the means of communication), excerpts from the text of the document in the message or transmission by e-mail [5; 6].

Ensuring a high level of quality of controlling information allows to accumulate useful analytical information in a timely manner, and on its basis to develop and evaluate alternative management decisions with the choice of the most optimal and rational information-based solution in specific business conditions. Making a management decision at the final stage of a complex management process largely determines the level of its quality, ensures the competitiveness and efficiency of a business entity. It is "decision-making that constitutes the essence of the management process, its initial and most crucial stage, determines the level of productivity and efficiency of the entire management system and processes". Moreover, management decision-making is the final stage of the management process and determines its outcome.

Thus, the quality of a joint venture's management decision is a set of properties of a management decision made by the management apparatus to achieve a common mission and goals and to meet the information needs of external users and the interests of individual participants in the joint activity and the joint venture as a whole.

The formation of a financial controlling system is impossible without the organisation of an effective mechanism for the circulation of diverse information between the divisions and the management of a joint venture. It is quite difficult to build models of data production, exchange and analysis, taking into account the peculiarities of functioning of various structural units of such enterprises caused by the specifics of their activities. However, without an efficient management information circulation system, it is impossible to create an effective financial controlling department. That is why the issues of organisational development of the information support system, within which the formation, circulation, exchange and analysis of controlling information between joint venture entities and the assessment of the volume of information support are quite relevant.

Insufficient information support of the financial control system leads to an increased risk of making economically unreasonable management decisions, inefficient use of the joint venture's resources, increased risk of joint activities, etc. Too much financial information may result in an inability to process all the information,

a reduced likelihood of assessing the most appropriate and reliable information, and incorrect management decisions. A financial control system requires only the information needed to make sound management decisions.

Thus, the level of awareness of the enterprise and the ability to effectively and quickly evaluate the information received becomes one of the criteria for assessing the stability of the enterprise, the most important factor in survival in the fight against competitors.

Insufficient attention of management personnel to the formation of a rational structure of financial control of joint activities leads to the fact that the use of financial, technical, personnel, organisational, intangible support and obtaining high-quality and timely information does not produce the expected results. The management apparatus uses additional resources to a greater extent to create computerised management systems, improve the skills of financial controlling employees, but does not pay attention to the study of information needs of users and their relationship with the amount of information produced and provided. Information is a production (economic) resource similar to material, labour and other types of resources [8, p. 11]. For any resource (including information) there is a demand and supply that determine its price and volume. The same opinion is expressed by Bondar M.I., who notes that "the volume of an information resource is determined by the need, as well as supply and demand" [7, p. 14].

The amount of financial information and its quality determine the efficiency of management decision-making and, as a result, the stability of the joint venture as a whole [10]. The increased risk of joint ventures requires the management to form and use high-quality and reliable financial information in management activities within the information capabilities of the management system for processing and analysing information.

The study of the structure and mechanism of formation of information flows in the system of financial controlling of joint ventures, ways of their rationalisation with consideration of the size of enterprise, its resource provision and information capacity of the management system allows solving the issue of efficient and rational construction of the organisational model of the system of financial controlling of joint ventures.

The financial controlling system generates a large amount of financial information that is required by users at different levels of the management hierarchy. In addition, this information should meet the information needs of employees of various structural units (accounting, analytical, planning, economic, production, technical, etc.) with different functional responsibilities. As part of a particular structural unit, each employee has certain functional responsibilities that require specific information to make decisions within their authority and to effectively inform senior management. Within the framework of their own functional responsibilities, each employee receives the necessary information, processes it, summarises it and transmits it to other employees in a form that is easy to understand.

The development of an effective structure for transferring information between structural units requires consideration of the scale of the enterprise and the amount of financial information required for the enterprise's operations, as "management activities may differ depending on the size of the enterprise and the level of the management hierarchy".

For each individual user of the internal and external environment, the scope of information, types of information, level of generalisation and form of presentation should be clearly defined. The time required to perform the relevant procedures to obtain the required information, the number of employees and their qualifications should be calculated.

The frequency of information presentation also has a significant impact on the amount of control information, as users need timely information within a certain period of time (daily, weekly, monthly, quarterly, annually).

Conclusions. Thus, the article considers the essence and properties of the information space of controlling information of joint ventures as an object of management. The proposals for defining the information space of controlling information as a structured set of information objects and methods of their organisation have shown that the degree of its structuring significantly affects the adoption of effective management decisions and that external and internal factors influence the volume, quality and usefulness of controlling information and the organisation of information flows and links between the structural units of a joint venture. When organising information security, it should be borne in mind that the vast majority of threats are generated by its employees, regardless of whether it is information in the form of employee knowledge or information contained in documents. Therefore, it is important to know the main factors that determine the behaviour of employees, which may encourage them to disclose proprietary information. Such factors may include objective conditions under which employees are the main source of information.

REFERENCES:

1. Onyshchenko S. V., Glushko A. D. (2022) Analytical dimension of cybersecurity of Ukraine in the context of growing challenges and threats. *Economics and Region*, no. 1 (84), pp. 13–20.
2. The Law of Ukraine "On Information" of October 2, 1992, No. 2657-XII. Actual as of 01.04.2018. Available at: <http://zakon3.rada.gov.ua/laws/show/2657-12> (accessed July 31, 2023).
3. Onyshchenko S. V., Hlushko A. D. (2020) Conceptual foundations of information security of the national economy in the context of digitalization. *Social Economics*. KhNU, issue 59, pp. 14–24.
4. Ostroukhov V. V. (2023) Information security. Available at: <http://westudents.com.ua/glavy/51894-12-nformatsy-na-vyna-yak-forma-vedennya-nformatsynogoprotiborstva.html> (accessed July 31, 2023).
5. Vlasiuk O. (2009) *Ukraine in the international security system: monograph*. National Security and Defense Council of Ukraine, National Institute of International Security Problems. Kyiv: Folio: Stylos, 572 p.
6. Bogush V. (2005) *Information Security of the State* / chief editor Shpak Y. Kyiv: MK-Press, 432 p.
7. Bondar M. I. (2010) Accounting and analytical information in the management of business activity. *Ekonomichnyy analiz*, no. 6, p. 13–16.
8. Galusina S. M. (2006) *Aspects of increasing the role of accounting and analytical information in the organization's management system: monograph*. 392 p.
9. Dubyna M. V. (2018) *Mechanism of development of the financial services market on the basis of the formation of the institution of trust: theory, methodology, practice: monograph*. Chernihiv: Chernihiv Polytechnic National University, 668 p.
10. Shkarlet S., Gonta O. & Dubyna M. (2017) Peculiarities of system approach use to cognition of economic phenomena. *Scientific Bulletin of Polissia*, vol. 1, no. 4 (8), pp. 9–17. Available at: <http://nvp.stu.cn.ua/article/view/93994>
11. Dubyna M. V. (2017) Scientific approaches to essence definition of informal factors. *Problems and prospects of economics and management*, no. 2 (10), pp. 22–28. Available at: <http://ppeu.stu.cn.ua/article/view/117458>
12. Lipkan V. A. (2006) *Information Security of Ukraine in the Context of European Integration: a textbook*. Kyiv: KNT, 280 p.
13. Onyshchenko S., Yanko A., Hlushko A., Sivitska S. (2020) Increasing Information Protection in the Information Security Management System of the Enterprise. In: Onyshchenko V., Mammadova G., Sivitska S., Gasimov A. (eds) *Proceedings of the 3rd International Conference on Building Innovations*. Lecture Notes in Civil Engineering. Springer, Cham, vol. 181, pp. 725–738.
14. Shkarlet S. M., Dubyna M. V., Tunik M. V. (2016) *Development of the controlling system in the management of insurance companies in the financial services market of Ukraine: monograph*. Chernihiv: Chernihiv Polytechnic National University, 320 p.
15. Shkarlet S. M., Gonta O. I., Margasova V. G., Dubyna M. V. (2014) *Mechanism of formation of the system of parbank intermediaries in the financial market in the context of ensuring economic security of Ukraine: monograph*. Chernihiv: Chernihiv Polytechnic National University, 272 p.

UDC 657.012.32

JEL M41

Alla Dmytrenko, Doctor of Economic Sciences, Associate Professor, Senior Lecturer at the Department of Finance, Banking and Taxation, National University "Yuri Kondratyuk Poltava Polytechnic". **Information space of controlling information in the context of joint activities: economic security aspect.**

The article considers the essence and defines the content of the category of "information space of controlling information". Such an approach made it possible to identify the main centres of its production and to allocate specific features of different types of controlling information and their role in the process of enterprise management. The article considers essence and properties of the information space of controlling information of joint ventures as an object of management. The study suggests that the information space of controlling information should be considered as a single environment for circulation of data on various components of development of a particular business entity, in which separate centres for production of such data operate and technical and relevant information systems for their analysis and transfer to management for making management decisions are functioning. The publication shows that insufficient information support of the financial controlling system leads to an increased risk of making economically unreasonable management decisions, inefficient use of joint venture resources, increased risk of joint activities, etc. As a result of the study, it was concluded that too much financial information can lead to the impossibility of processing all the information, reducing the likelihood of assessing the most appropriate and reliable information, and making erroneous management decisions. As a result of the study of the selected topic, the author substantiates the conclusions which make it possible to define the concept of "financial controlling information" as a set of diverse data produced by individual structural units of business entities, public authorities, other institutions and organisations and used in the process of preparing reports for managers at various levels with a view to making correct management decisions; the system of enterprise information space is a separate system, but interconnected with the system of financial controlling information. It is also determined that the objective conditions under which employees are the main source of information can also be considered as factors.

Key words: controlling, financial controlling, joint activity, joint venture, information support.

УДК 657.012.32

JEL M41

Дмитренко Алла Василівна, доктор економічних наук, доцент, доцент кафедри фінансів, банківського бізнесу та оподаткування, Національний університет «Полтавська політехніка імені Юрія Кондратюка».

Інформаційний простір контролінгової інформації в умовах здійсненні спільної діяльності: аспект економічної безпеки.

У статті розглянуто сутність та визначено зміст категорії «інформаційний простір контролінгової інформації». Такий підхід надав можливість визначити основні центри її продукування та виокремити специфічні риси різних типів контролінгової інформації та їх роль у процесі управління підприємством. В статті розглянуто сутність, властивості інформаційного простору контролінгової інформації підприємств спільної діяльності як об'єкта управління. За результатами дослідження запропоновано інформаційний простір контролінгової інформації розглядати як єдине середовище обігу даних про різні складові розвитку окремого суб'єкта господарювання, у якому здійснюють свою діяльність окремі центри продукування таких даних та функціонують технічні та відповідні інформаційні системи їх аналізу та передачі керівництву для прийняття управлінських рішень. У публікації досліджено, що недостатній рівень інформаційного забезпечення системи фінансового контролінгу призводить до зростання ризику прийняття економічно необґрунтованих управлінських рішень, неефективного використання ресурсів спільного підприємства, зростання ризику спільної діяльності та ін. В результаті проведеного дослідження прийшли до висновку, що занадто великий обсяг фінансової інформації може призвести до неможливості опрацювання всієї інформації, зниження ймовірності оцінки найбільш доцільної та достовірної інформації, прийняття помилкових управлінських рішень. В підсумку дослідження обраної тематики обґрунтовані висновки, які дають можливість визначити поняття «фінансова контролінгова інформація» як сукупність різнобічних даних, які продукуються окремими структурними підрозділами суб'єктів господарювання, державними органами влади, іншими установами та організаціями та використовується у процесі підготовки звітів для керівників різних рівнів з метою прийняття ними правильних управлінських рішень; система інформаційного простору підприємства є відокремленою системою, але взаємопов'язаною з системою управління та системою фінансового контролінгу. Також визначено, що факторами можна вважати також об'єктивні умови за яких працівники є основним джерелом інформації.

Ключові слова: контролінг, фінансовий контролінг, спільна діяльність, спільне підприємство, інформаційне забезпечення.