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Conceptual problems of financial accounting in a digital economy

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Abstract

The article shows modern problems of financial accounting associated with formation of conceptual accounting provisions in the context of digitalisation of society and economy. An open system of financial accounting, consisting of interrelated and interdependent elements, functions in the new economic conditions. The accounting concept created by regulatory legal acts does not meet the requirements of practice and does not meet current users' needs. There are prerequisites for changing the entire accounting system due to modern technologies (blockchain, artificial intelligence), which can completely change the traditional ideas about the formation of accounting and analytical information as well as main functions of accountant. The study of the current financial accounting concept and the formulation of directions for its development in the digital economy formation conditions based on the identification of conceptual problems of the modern accounting system characteristic is the purpose of the work. An analysis of the digital economy impact on the accounting system formation, a review of the main system elements that are undergoing the greatest transformation and the identification of problem areas that need to be addressed in the formation of the digital economy are the objectives of the study. The most relevant problem is the legal regulation of financial accounting, as well as issues of methodological nature related to the need for internal content, proposed by the authors of the accounting system in accordance with the changed digital economy information needs.

Keywords: digital economy, accounting, accounting system, concept of accounting, accounting regulation

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Концептуальные проблемы финансового учета в цифровой экономике

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Аннотация

В статье показаны современные проблемы финансового учета, связанные с формированием его концептуальных положений в условиях цифровизации общества и экономики. В новых экономических условиях функционирует открытая система финансового учета, состоящая из взаимосвязанных и взаимообусловленных элементов. Сформировавшаяся в нормативно-правовых актах бухгалтерская концепция не отвечает требованиям практики и современным потребностям пользователей. Имеются предпосылки для изменения всей системы учета за счет передовых технологий (блокчейн, искусственный интеллект), которые могут полностью изменить традиционные представления о формировании учетно-аналитической информации, а также об основных функциях бухгалтера. Целью исследования является изучение сложившейся концепции финансового учета и формулирование направлений ее развития в условиях формирования цифровой экономики на основе выделения характерных концептуальных проблем современной учетной системы. Задачи исследования связаны с рассмотрением влияния цифровой экономики на формирование учетной системы, формулированием основных элементов системы, подвергающихся наибольшей трансформации, и выявлением проблемных областей, требующих решения в условиях цифровой экономики. Наиболее актуальна проблема нормативно-правового регулирования финансового учета, а также вопросы общеметодологического характера, связанные с необходимостью внутреннего наполнения предложенной авторами системы учета в соответствии с изменившимися информационными потребностями цифровой экономики.

Ключевые слова: цифровая экономика, бухгалтерский учет, система бухгалтерского учета, концепция бухгалтерского учета, регулирование бухгалтерского учета

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Introduction

In all countries, accounting systems were developed long ago. Moreover, they functioned quite successfully and differed from each other depending on the national traditions. With the beginning of market transformations in the 1990s, in connection with the changes in social relations and the socio-political system, it became necessary to revise both the theoretical and methodological foundations of accounting. The same situation is observed at the moment. The digitalisation of the society and the digital platform economy [Rozhkova, 2017] have significantly changed the nature of public relations [Rozhkova, Blinova, 2020] and led to the emergence of a new type of information. In addition, the requirements for such information from the part of stakeholders, and, in general, for accounting profession and competences have changed significantly [Rozhkova, Blinova, 2021].

Digital economy and its particularities lead to a reduction in production and management costs, including search, replication, verification, transportation costs etc. [Goldfarb, Tucker, 2019]. By virtue of information technology, speed and variety of launched services and goods is increasing. In many areas of the economy, intermediaries are being replaced by automated network services, which increases the profitability of companies due to cost reduction and increased customer satisfaction. The widespread expansion of the digital economy leads to a fundamental change in production, business-models etc. Various forms of individual production begin to play a predominant role [Voskanyan et al., 2021].

New economic technologies are emerging: crowdfunding (fundraising from people) and crowdsourcing (transferring part of production functions to an indefinite circle of people) [Fukuda, 2020]. The information world is being filled with new terms, which include cryptocurrency, artificial intelligence, robotisation, etc. The digital economy has positive effects: an increase in economic growth and labour productivity, an acceleration in the small and medium-sized businesses growth rate. However, at the same time digitalisation demand new mechanisms of collaboration and new industrial relations.

Methodology

Currently, there is a lag in the formation of accounting methodology from practical realities. As constraining factors for the development of financial accounting in the digital economy, the authors consider the following:

- conservatism in the accounting practices;

- decrease in the usefulness of reporting information for a number of users and accounting functionality.

The presence of the strict standardisation of accounting in all periods of its existence with established rules, methods and techniques at all levels of regulation; sanctions for the inaccuracy of financial statements late submission indicate the conservative nature of accounting. Due to the significant regulation in the field of accounting it is difficult to transform, change and innovate.

If in previous periods of economic development this moment could be assessed as positive, at present, when the rate of change is high enough, it is a significant limiting factor for the development of accounting.

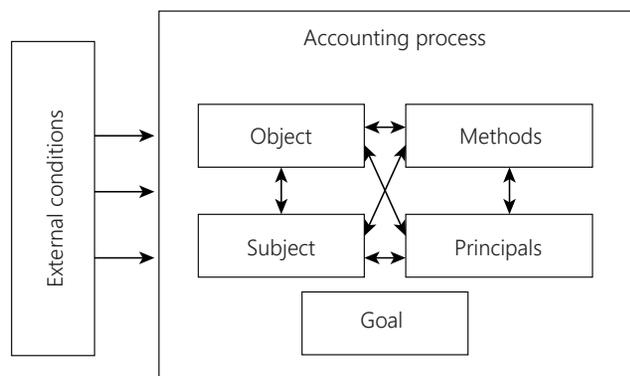
The application of International Financial Reporting Standards (IFRS) based not on rigid rules, but on conceptual principles, was a consequence of the challenges to financial accounting, but could not solve the problem of accounting lagging behind the users' need for quality information.

At the same time, dramatic changes in society and the economy inevitably demand mobility and manoeuvrability.

We associate decrease in the usefulness of accounting data with the fact that gradually economic entities experience not only a lack of financial accounting information, but also cannot receive it in a timely manner. Such fundamental qualitative characteristic of information (it can be found under IFRS regulation) as relevance is violated.

Therefore, at present, an increasing number of the financial accounting users understand the need to obtain information from other alternative sources. The difficulty lies in the fact that internal users of information can work with financial accounting data, and external users have a limited amount of information, mainly only financial statements, which are usually published on the company's website. As a result, there is a tendency to make decisions based on non-financial reporting data (not only financial one), which shows much more information about the activities of an economic entity, especially if new methodologies of analysis (for example big data analysis) are used.

Since accounting is an open system with an integral set of objectively and regularly arranged elements, interconnected and interacting with each other, each of them specifically characterizes and affects the whole, considering the influence of the external environment, which is currently characterized by openness and dynamism (Fig. 1).



Compiled by the authors on the materials of the study

Fig. 1. Financial accounting system graph

Results

The elements of the accounting system in the smart economy have undergone a significant transformation, which requires a revision of the accounting concept based on the new changed conditions for the functioning of economic entities.

External factors that currently significantly affect the accounting system include globalisation and digitalisation of society and the economy. Fundamentally new economic phenomena entailed a high degree of internationalisation of activities, the integration of social production.

Globalisation is an objective condition for significant changes in the accounting and reporting systems of all countries, a prerequisite for the creation of unified accounting systems to provide information about activities of organisations, regardless of nationality and territorial remoteness, according to uniform principles and techniques.

The accounting harmonisation process is still ongoing. In Russia, the creation of national accounting and reporting standards is actively being carried out, the use of IFRS is allowed, but the goal of creating an effective financial accounting system harmonized with IFRS has not been fully achieved due to a number of limiting factors.

The digitalisation of the economy, the creation of an information society with a high level of users' information needs, an information culture, free access to information, also entailed global changes in the accounting industry.

Initially, there was a significant computerisation of information processes, which became a catalyst for fundamentally new approaches to obtaining accounting information. Further, modern technologies such as cryptography, microscopic robots, artificial intelligence, neural networks, blockchain have strengthened this process; information content of a new composition and quality was created [Antipova, 2018].

Both globalisation and digitalisation affect all elements of the system. In the context of the smart economy,

accounting objects, the principles of their allocation and structuring are being transformed. The authors have analysed Russian legislation (the federal laws "On Accounting" No. 129-FZ and No. 402-FZ) and found a clear dynamic in fixing accounting objects in regulatory acts: from property, liabilities and business transactions to assets, income, expenses, liabilities and facts of economic life^{1,2}.

However, the use of modern technologies, for example, such as blockchain, provides a fundamentally new option to build an accounting system and allocate accounting objects.

The traditional accounting entity (subject of accounting process) has also undergone a change. This is due to the transformation of accounting processes in connection with use of modern information technologies. So, in the accountant's professional standard, the purpose of the activity is indicated as the formation of documented systematized information and formation of financial statements with the disclosure of the financial position, financial result and cash flow³. Many of the functions of an accountant indicated and described in detail in the standard have been completely or partially replaced by computer technologies. These are such functions as accounting, preparation and presentation of financial and consolidated financial statements. More and more documents are being processed electronically, and artificial intelligence technology is developing.

On the one hand, modern technical solutions are fully capable to minimize or completely eliminate routine accounting operations, which allows business entities to avoid wasting time and money for processing and entering primary documents [Blinova, Ivanko, 2016]. On the other hand, the use of artificial intelligence and its increasing introduction into the economic activities of organisations entails not only an increase in the volume and means of data storage, the possibility of analysing complex data, but also minimisation of human participation in this process.

With the introduction of artificial intelligence in the accounting industry, it is predicted that traditional accounting functions: double-entry, interpretation of accounting data and presenting it in a convenient or legally

¹ Russian Federation. *Federal Law dated 21 November 1996 No. 129-FZ "On Accounting"*, available at: http://www.consultant.ru/document/cons_doc_LAW_12441 (accessed 14.08.2022).

² Russian Federation. *Federal Law dated 6 December 2011 No. 402-FZ "On Accounting"*, available at: www.consultant.ru/document/cons_doc_LAW_122855 (accessed 14.08.2022).

³ Ministry of Labor and Social Protection of the Russian Federation. *Accountant's professional standard*, available at: <https://classinform.ru/profstandarty/08.002-bukhgalter.html> (accessed 10.08.2022).

fixed format, control operations etc. will be eliminated. The future role of accountant is still not clear.

In the long run, the accounting process will be completely transformed. As a result, we will see automatic obtaining a ready-made version of any format of financial statements, their disclosure; varied results of the reporting analysis and interpretation of this analysis, modification of traditional transactions and even double entry.

Blockchain technology, smart contracts with a computer algorithm of transactions allow not only to avoid intermediaries when recording transactions, reduce costs and implement the security of the transaction, but also to get a confirmed decentralized record and storage of the transaction.

With the informatisation of business processes, accounting methods such as primary observation, grouping and systematisation, complete generalisation of information change their meaning and essential content. With the use of modern technologies, the user instantly receives a complete generalisation of information that meets all the quality requirements for information. Documenting as a method of primary observation is losing its relevance. The principles (conceptual and methodological) also require significant revision.

There is also a strengthening of some traditional accounting functions from one hand and a loss of relevance of other accounting functions from another hand. Traditionally, accounting functions are considered as “action, activity” and include control function, ensuring the safety of property, informational, feedback and analytical function [Getman, 2019]. In the digital economy, the information function of accounting is significantly enhanced, while other functions are being transformed.

For example, the control function in the blockchain system is implemented not in the accounting system, but already during the execution of the transaction. Such a system refers to the decentralized storage and transmission of information, transactions are secured by cryptographic methods and have high degrees of protection, they cannot be faked or changed. All records of completed transactions are stored in the blockchain registry, which ensures that records are stored in such a way that any change is visible to all participants in the settlement. With such calculations, the seller is guaranteed to receive payment, and by paying for the transaction, the counterparty buyer avoids a fraudulent transaction, since his right to sell is confirmed [Sazonov, Voblenko, 2019].

Only the one consideration of such technology involves working out the issue of obtaining adequate and complete information for accounting purposes from all parties to the transaction.

Discussion

Since its inception, accounting has been a strictly regulated system formed in accordance with the current state of social development. Since society and the economy are dynamically developing, the approaches to accounting and its regulation are also being transformed. The consequences of changing the accounting concept in the digital economy should be reflected in the legal regulation of accounting, consolidating its new conceptual provisions.

In the law “On Accounting” No. 129-FZ (1996) the target setting (tasks) of accounting is also enshrined in the formation of information and, in addition, the provision of information to interested users, the prevention of negative facts of activity and the identification of growth reserves. At the same time, accounting is seen as the process of forming information is disclosed as its collection, registration and generalisation⁴.

In the law “On accounting” No. 402-FZ (2011), only the concept of accounting is given, while the emphasis is also on the formation of information, the mandatory use of accounting requirements and the preparation of financial statements⁵.

In the laws No. 402-FZ (2011) and No. 129-FZ (1996) the emphasis in the definition of accounting is placed on the formation of information, the mandatory use of accounting requirements and the preparation of financial statements.

A similar position is fixed in the Concept of accounting in the market economy of Russia (1997), where the purpose of accounting in general is presented as the formation of information for external and internal users⁶.

By 2011, there had been significant change in accounting legislation: the scope of the law “On Accounting” was changed, accounting objects, accounting requirements, the list of subjects of regulation, the procedure for preparation and submitting financial statements, requirements for the chief accountant changed; reduced responsibility for keeping records. They were associated with the harmonisation of accounting in accordance with International Financial Reporting Standards and the goals of improving the quality and availability of information generated in accounting and reporting, as well as improving the accounting regulation and quality control of accounting statements.

⁴ Russian Federation. *Federal Law dated on 21 November 1996 No. 129-FZ “On Accounting”*, available at: http://www.consultant.ru/document/cons_doc_LAW_12441 (accessed 14.08.2022).

⁵ Russian Federation. *Federal Law dated on 6 December 2011 No. 402-FZ “On Accounting”*, available at: www.consultant.ru/document/cons_doc_LAW_122855 (accessed 14.08.2022).

⁶ Russian Federation. *The concept of accounting in the market economy of Russia*, available at: http://www.consultant.ru/document/cons_doc_LAW_17312/ (accessed 14.08.2022).

It was proved that there is a significant transformation of the accounting concept, which should be reflected in the accounting legislation. There is an urgent need to bring legislation on the conceptual foundations of accounting in a smart economy in line with current realities. Since there has been a change of functions, a transition from one system level to another; the priorities, direction of development of all economic systems have changed, it is necessary to conduct further research to develop the accounting paradigm in the smart economy and revise the current accounting concept.

Conclusion

The digitalisation of society and digital economy have significantly changed the nature of public relations and led to the emergence of a new type of information. In addition, the requirements for such information from the part of stakeholders, and, in general, for accounting labour have changed significantly.

The transformation of the accounting system, from primary documents to accounting registers, financial statements as a logical completion of the accounting process, is an inevitable process nowadays. The current situation has a significant impact on the organisation and use of financial accounting data. The objective reason for this

transformation is globalisation, the formation of a new information environment, a system of information support for socio-economic processes; the transition to an information society and the formation of a digital economy.

The conceptual accounting provisions in the Accounting Concept and the federal law “On Accounting” do not meet the modern requirements of society and the economy. The purpose of accounting in these regulatory documents requires a revision and an issue of new ones. Also, the assigned functional responsibilities of an accountant in the accountant’s professional standard do not consider modern trends in the information economy and will be a matter of change in future due to the introduction of digital technologies; elimination of routine operations.

Analysis of the modern accounting system showed that all elements of the system have changed in the smart economy. The external environment has a significant impact on the internal content of the elements of the system. The object and subject of accounting, methods and principles of accounting must be adjusted.

It is also necessary to eliminate a backlog of legislative regulation of the financial accounting concept, its methodology from the practical needs of accounting and analytical information users; continue scientific research to develop a concept of accounting in line with global trends.

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