Journal of ENVIRONMENTAL Treatment Techniques

J. Environ. Treat. Tech.
ISSN: 2309-1185

Journal web link: http://www.jett.dormaj.com

Formation of Financial Reporting in the Conditions of Digital Economy

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Received: 13/09/2019 Accepted: 22/11/2019 Published: 20/12/2019

Abstract

This study is devoted to the study of the development of accounting and the formation of financial reporting in the conditions of digital economy. The development of digital technologies is generating changes in all areas of life by simplifying it, on the one hand, and by creating new challenges for future changes in a particular area, on the other hand. These changes apply to accounting and reporting, which leads to a review of existing approaches. In this article, we highlighted the main directions of development of accounting and reporting in the context of digitalization of the economy with a detailed disclosure of the features of each direction. Not only the requirements for the disclosure of information in reports, but also the technologies for accounting and information processing, accounting facilities, and data presentation format are changing under the influence of the fourth industrial revolution. The functions of an accountant do not remain without attention, which are expanding in the direction of the obligations of the financial director in the digital economy. Changes in the quality of the content of financial reporting pose a risk of disclosure of confidential information, which in turn requires limitation of information by user category. Compliance with all these parameters of changes shall lead to the formation of financial reporting of a new format, which will meet modern requirements and possibly the future.

Keywords: Digital economy, Financial reporting, Digital technology, Digital assets

1 Introduction

In the past few years, the main trend in the global economy, including Russia, is the development of the digital economy, which is presupposed by widespread introduction of information, digital technologies into our daily life that automate many processes. The state focus on digitalization of the economy affects the entire system of information support for the socio-economic processes, changes the system of accounting and reporting, sets the trend in the scientific community (conferences, forums, scientific publications), where they actively discuss the development of a phenomenon under the conditions of "digital economy", “digitalization of the economy”, “development of blockchain technologies”, “application of neural networks and artificial intelligence”.

Cloud computing, big data analysis, artificial intelligence technologies, high automation have become an adversary of the traditional business model of accounting and reporting and influenced their future. The development of the digital economy necessitates a review of conceptual, methodological and substantive approaches to accounting and reporting, in connection with which modern researchers are faced with the task of creating an optimal accounting system and forming financial reporting on its basis (1). Our task in this study is to determine the main development directions for the accounting and reporting in the digital economy, following which will lead to the formation of financial reporting of a qualitatively new format with increasing user needs.

2 Methods

To conduct our study, we analyzed the financial reporting of a number of Russian companies, studied the main trends in the development of accounting and reporting (including in the area of regulatory reform), investigated modern digital technologies in terms of their application for accounting and financial reporting, analyzed scientific publications on the subject of domestic and foreign scientists.

Before proceeding to the study of the development of accounting and reporting in the digital economy, we decided to assess the current state of the current financial reporting system in Russia to identify the main shortcomings. Our observations (including those on the financial reporting of a number of companies) showed that they can be conditionally divided into three groups (Fig. 1), which indicates the limited potential for using these reports to make informed management decisions (2).

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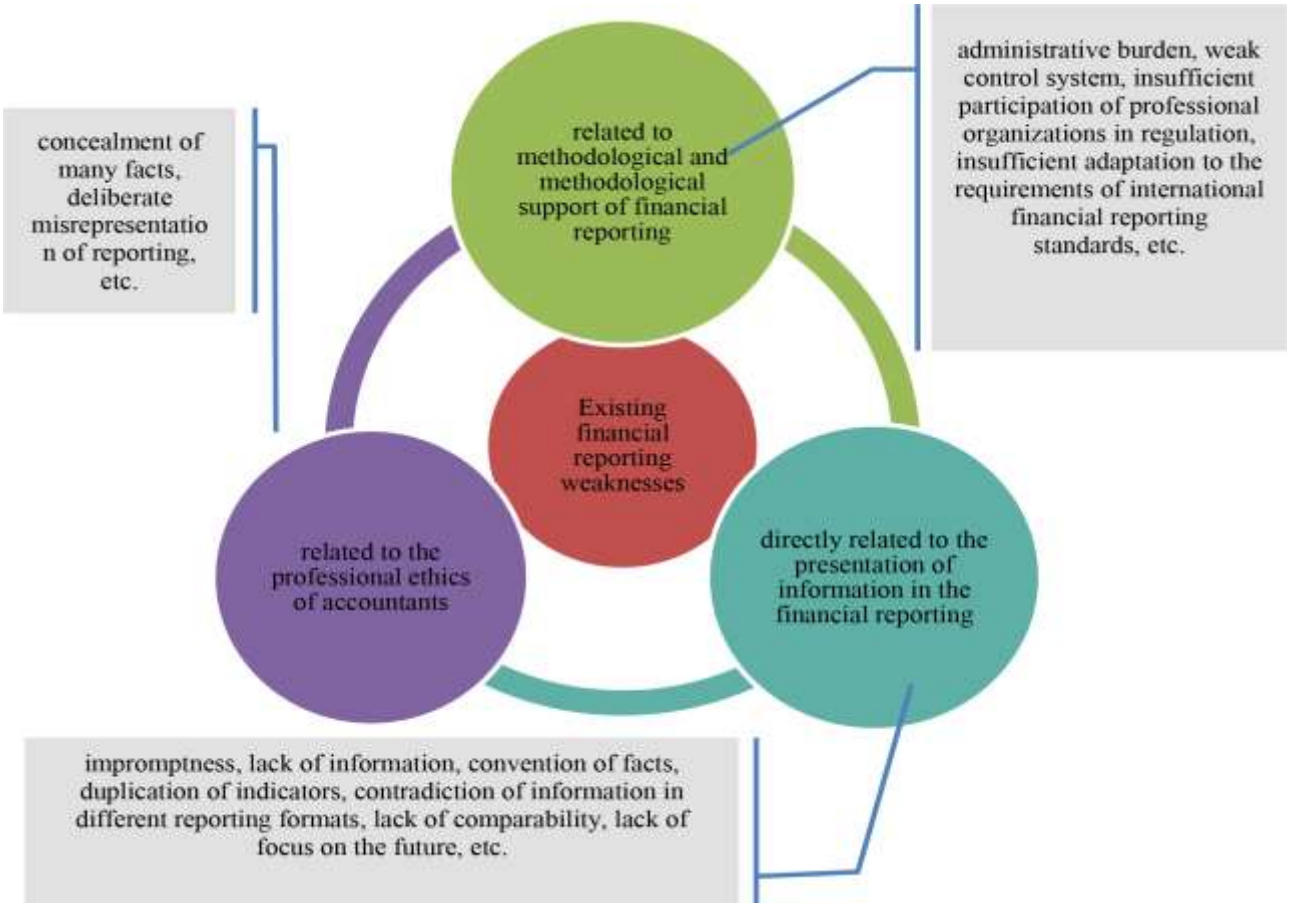

Figure 1: Current weaknesses in modern financial reporting

Analysis of the main trends in the development of accounting and reporting, the possibilities of applying modern technologies for accounting and financial reporting, allowed classifying the ongoing changes in the system of accounting and reporting in the context of digitalization of the economy. In our opinion, the main trends in the development of accounting and reporting in the context of the implementation of the digital economy program can be divided into 5 interdependent areas:

- making changes to the technologies for accounting and information processing;
- expansion of accounting facilities;
- development of electronic document management;
- making changes to the format for the presentation of accounting data in the reporting;
- expansion of the functions and roles of an accountant.

In the next section, we will take a closer look at each of the identified areas.

3 Results and Discussion

3.1 Making changes to the technologies for accounting and information processing

The introduction of information technologies in our life is happening exponentially. The modern period of development of digital technologies is also called the fourth industrial revolution (Industry 4.0) (3). Of course, these technologies have a significant impact on the accounting and reporting system. The development of technologies for accounting and information processing can be conditionally divided into 2 groups:

a) those that have already found wide application in accounting and reporting - cloud technologies. The development of these technologies allows providing instant access to financial information at any time from anywhere in the world on-line, send official financial reporting to regulatory authorities, conduct correspondence with them, check counterparties for negative factors, etc.;

b) those that have not yet found widespread use, but will be able to greatly modify the future of accounting and reporting - blockchain technology, neural networks, etc. It is assumed that the use of neural networks (artificial intelligence) will make the collection and registration of facts of economic life, control and reconciliation a machine work, and blockchain technologies will protect companies from falsification and destruction of data through the use of a single register for storing transaction records and simplify the preparation of reports for regulatory authorities.

It is assumed that the use of digital technologies will make a major breakthrough in the formation of financial

reporting online, bridging the time gap between the reflection of the facts of economic life in accounting and the reflection of these data in the items of the financial reporting.

3.2 Expansion of accounting facilities

In the context of the development of the digital economy, accounting objects are also undergoing changes, which is associated with an increase in the number of indicators characterizing various aspects of business and modern trends in the global economy (4). Currently, there is an active discussion in the scientific community on the possible recognition in accounting of digital assets - tokens and cryptocurrencies. Today, some authors attribute digital financial assets to intangible assets, while others - to financial investments, stocks, cash. Our study showed that neither the Russian accounting system, nor the international accounting standards regulate the accounting of tokens and cryptocurrencies today. Professor L.A. Tchaikovskaya and S. Enus proved (5) that the American accounting standards do not regulate the accounting of cryptocurrencies and tokens, which indicates the relevance of the study in this area.

Currently, the national standards of individual countries (Japan, Canada, Germany, Australia, Great Britain, Norway, Sweden, Belarus, Israel, Bulgaria) provide for transactions with cryptocurrency and tokens as taxation objects and are recognized as objects in accounting.

3.3 Development of electronic document management system

Electronic document management is gaining popularity in modern conditions, many different companies are moving to electronic document management instead of paper. If the electronic document management is associated with the exchange of documents between structural units in commercial organizations (the most common electronic document management programs: “Optima Workflow”, “BOSS-Referent”, “Delo”, “Documentum”, “Euphrat-Document Management”), then it is also used for interaction with other institutions in government institutions (mainly the document management automation system - DMAS - is used). Currently, electronic document management is actively implemented by the Central Bank of the Russian Federation, which uses it to interact with supervised organizations through "personal accounts", which allows exchanging documents, letters, as well as accepting reports from these organizations. It is assumed that this exchange channel can also be extended to commercial organizations with an aim of developing electronic document circulation between contractors and regulatory authorities by establishing communications on the organization's INN (Taxpayer Identitifcation Number). Using the company's INN as the main parameter when searching for counterparty through "personal accounts" will allow identifying the client and not being mistaken in sending data.

In our opinion, the development of digital economy shall contribute to the digitization of all accounting documents, including primary documents, by special encoding of the details fields, which will allow the organization automatically recognizing the primary document upon receipt from the counterparty and transferring it to the accounting system. The use of electronic document management will increase not only the efficiency of work, but also give instant access to them, increase the mobility of employees, and reduce company's costs by saving paper and cartridges. But the main advantage in electronic document management is the simplification of the formation of financial statements by storing primary data in a single information space.

3.4 Making changes to the format for the presentation of accounting data in the reporting

There is also a change in the presentation format of accounting and reporting data under the influence of digital technology. Despite the versatility of areas in accounting and reporting (creative, intellectual, actuarial, environmental, strategic, social, financial, managerial, statistical, tax), the external and internal accounting data are converging and presenting their data in a single integrated reporting, which is due to the many repeated indicators in reporting with all its diversity (financial, tax, statistical, strategic, etc.) and the lack of time for the formation of various kinds of reporting and for different user groups (6, 10).

The main problem of the existing financial reporting is the gap between reflection of the fact of economic life and the formation of financial reporting. According to some scientists, the solution to this problem may be the interconnection of accounting accounts with the items of financial reporting, while others indicate the need to create a single information space that would allow reflecting the facts of economic life directly in the reporting items. An important role in the implementation of such a single information space for accounting and the preparation of financial reporting shall play the ongoing project of XBRL reporting format (7, 11). This reporting format will allow the report creator generating data only 1 time with all the facts (if necessary, it can also be modified) and transmit to the user, who can form the necessary reporting format based on these data. The main goal of this program is to provide users with access to detailed, transparent and at the same time reliable reporting. Reporting generated in XBRL format will allow receiving data in the desired format with possible hyperlinks when processing the data.

If at present, due to limited technical capabilities and time, the business entity generates a compulsory copy of the financial reporting both to the tax authority and to its investors, owners, statistical agencies and other users (as a result of which it is uninformative for many users, not relevant, etc.), then in the context of the development of the digital economy, within the framework of applying the XBRL reporting format, it will be possible to generate accounting data for users with the desired and necessary form of reporting, having previously set up a set of indicators for each group of interested parties in the reporting program. On the one hand, this allows complying with the confidentiality of information, on the other hand, it eliminates redundancy of indicators for some groups of users, and for others - it ensures information content (8,12,15-17).

Another, quite a lot of interesting format and one of the promising areas of information disclosure in financial reporting is the development of 3D format reporting. Our study in this direction showed the practical absence of

scientific publications on this topic, which allows making a conclusion that the development of this format has begun. In some form, 3D reporting is used by large public companies in the preparation of annual financial reporting using active hyperlinks to reporting items; when clicking on them, the user is automatically redirected to the reporting page, which provides explanatory information on this item.

In our understanding, the "3D reporting format" involves the synthesis of information reflected in financial reporting in primary documents and other data sources by applying an active hyperlink to each reporting item to detail and disclose the clarifying parameters, including non-financial information. This reporting format allows simplifying the procedure for analyzing financial reporting due to the wide development of analytics and seeing the confirming primary documents for each accounting object by the users. The proposed detailing of information can be divided into main (accounting date, supplier data, status of settlements with the supplier with the application of periodic documents, etc.), financial (accounting data: initial cost, contract value, depreciation method, accumulated depreciation, cost of repairs, etc.) and external (technical and external features of the object with photos attached). Since this reporting format will also contain confidential information, the main guideline for the formation of such a reporting format is meeting the needs of top management and company owners.

3.5 Expansion of the functions and roles of an accountant

The ongoing changes in the world economy as a whole, the rapid development of digital technologies (9, 14,18,19), the increasing requirements for accounting and data reporting determine the expansion of functions and the changing role of an accountant in business (10, 13). As part of our study, we analyzed the available vacancies of the chief accountant in Kazan, Russian Federation, using to the website wwwheadhunter.ru (100 of the 168 vacancies available as of 01.04.2019). The analysis showed that the functions of this profession have really changed and expanded towards the responsibilities of financial director. This is also indicated by different speakers at the world economic forums and conferences.

4 Summary

Each emerging technology is a step or a new step on the path of technological development. Our study showed that the development of digital technology has a significant role in changing the accounting and reporting system and their adaptation to modern business realities. The implementation of the above areas when applying digital technologies shall lead to the formation of a qualitatively new format of financial reporting that meet modern user requirements, increase the transparency of business and investment potential of economic entities, and, ultimately, expand the information space of the economy, which is the main goal of development of the digital economy.

At the same time, the use of modern technologies and the further development of accounting and financial reporting due to this symbiosis will depend on whether we are ready for a transparent, reliable accounting system that cannot be manipulated in our interests, whether business and the state are ready to play openly, whether the world is ready to business without cheating?

5 Conclusions

The implementation of the digital economy in connection with the rapid development of digital, information technology causes a change in all spheres of human life, including accounting and reporting system. The use of such technologies encourages the revision of traditional accounting and reporting models and leads to the need to change this system in several areas at once, following which in the future will lead to the full implementation of the digital economy.

6 Acknowledgements

The work is performed according to the Russian Government Program of Competitive Growth of Kazan Federal University.

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