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БАЯНДАМАЛАРЫ

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NEW OPPORTUNITIES FOR THE USE OF DIGITAL TECHNOLOGIES IN ACCOUNTING

Abstract. Technology accelerates all the industries to which they relate. Most accountants already use digital tools and streamline processes to make them paperless. However, as technology continues to evolve and automate even more numerous functions, conversations are transformed into the prospect of accounting without human participation. In the real world, technologies that transform the financial industry in no way make the human factor redundant.

Instead, technologies such as cloud, artificial intelligence (AI), and blockchain will enable accountants - and the entire financial services industry - to reduce manual data entry and improve the speed, accuracy, and quality of data.

Keywords: accounting, digitalization, technology, optimization, blockchain.

INTRODUCTION

Thanks to cloud-based accounting and software-as-a-service (SaaS) applications and the ability to access financial data from any device connected to the Internet, virtualization has become the new norm.

Among the areas of development of the world economy stands out the transition to digital technology, where the main resource is information. This resource is of great value and acts within organizations as an intangible asset. By accumulating specific information, we gain knowledge about the object being accumulated. Hence, the idea of the digital economy is not to present the finished product (product) or service to the consumer, but to create customization tools (customization) by partially or completely changing the product based on a specific request, complementing the product with some improved or additional parts. So, the consumer becomes a producer, as he fully participates in the process of creating a consumed product.

MAIN PART

At the same time, in the model of the digital economy the consumer envisages to produce exactly as much as he needs and, importantly, at the time - when he needs it. Consequently, the production will consume only the required amount of resources, the minimum time spent. In the digital economy, it is impossible to produce more than it should, and to promote the extra to the next in the chain, thereby increasing its costs, as well as the extra links of the product creation chain that produce themselves are impossible.

One of the most important parts of the accounting system is the information component of the two subsystems - financial and management accounting. There is a reorientation from the control function to the informative one, based on the organization of points of digital transformation of the enterprise. It requires the development of new indicators, methods for collecting and processing not only financial information, but also the sufficiency of its integration with information about other aspects of business and the external environment. Analyzing the content of literary and scientific sources devoted to this problem, it can be argued that the development of the theory and improvement of accounting practices is

metaphysically associated with the expansion of the information potential of the existing economic space. At the same time, 1T-technologies cause significant modifications, both in the methodology and in the applied direction of the science of accounting.

Many researchers believe that the main directions of transformation, in terms of improving the theory of accounting and reporting in a digital economy, are shown in Fig. 2. Particularly, it is possible to single out a study of the possibilities of evaluating new accounting objects, which are intellectual human capital, customer base, innovative products, R & D results, etc. [1] The inclusion of non-financial information in the accounting system (quality of the client base, state or realization of social responsibility, existence of economic security risks, degree of application of energy-saving technologies, etc.) is observed. There are modern developments of new information technologies, such as cloud technologies, open technology platforms, electronic reference information systems, the creation of a single international format and content of financial statements in electronic form XBRL [2]. It seems that this will create the possibility of building such a national accounting system, where the indicators characterizing the state of the organization's internal business processes and the external environment, indicators of integration of various types of accounting are integrated.

It is necessary to change the model of education, since "knowledge, skills and abilities (ZUN) are also relevant in competence-based learning. Without ZUN, competences are not formed, and without competences, knowledge does not manifest itself "[3]. At the same time, the influence on the development of science and education - the external environment, in particular - the level of informatization of society, should be considered and taken into account. The current state of the informatization of society requires: the technologization of educational and evaluation processes; development and use of software tools for the automated processing of materials for assessing the educational achievements and competencies of students; ensuring the statistical processing of results and their presentation in formats available to students, teachers and university administrators.

Ensuring these requirements implies a multiplicity of activities affecting traditional and innovative methods for assessing learning outcomes, in particular, the procedure and methodology for assessing subject and over-subject competencies [4]. And here the problems are the achievement of independence, consistency, reliability and validity of the boundary and final assessments by the teacher to improve teaching. In this aspect, it is necessary that real or quasi-realistic conditions are created for students in the assessment of competencies, and the results of assessment are available, transparent, reasonable and objectively interpreted.

Another major problem is the imperfection of the coordination of the integration processes of professional and educational standards of the higher education system [5]. The combination of the requirements of professional and specialized educational competencies that university graduates should have can be represented as a process of their formation in the framework of intermediate stages. Staging indicates a link between competency assessment processes and student learning [6]. They include: the development of university standards, indicators, gauges, criteria, norms and rating scales; compilation and testing of end-to-end procedures and standardized methods for independent assessment of learning outcomes, allowing to organize the accumulation of valid results in the portfolio of each student during his study.

Today, each organization maintains accounting, and the list of duties of an accountant most often depends on each particular firm. An accountant has a wide range of responsibilities, in particular, he is responsible for drafting primary documentation, monitoring its accuracy, preparing for counting processing, and participating in the development and implementation of measures aimed at maintaining financial discipline and rational use of resources. The accountant is also responsible for the calculation of wages to employees, payments under civil contracts and personal income tax, tax and management accounting, he prepares and submits tax reports to the funds of the Russian Federation and the tax inspectorate and minimizes tax payments. Among other things, an accountant often performs duties that are not prescribed in a job description, sometimes they impose on him the work of other accountants, saving on workplaces. In addition, an accountant is required to provide the necessary comparable and reliable accounting information for internal and external users of financial statements. It is believed that soon it will be possible to fully automate the accounting and tax accounting, which will free the accountant from part of the above described type of work, however, it will still be necessary to analyze the

financial condition of the company independently, but then it will be much longer and the quality of the analysis results will be higher [7].

Proper organization of accounting is important for improving production efficiency. Therefore, national accounting standards are being developed and introduced, which basically rely on international standards and take into account the specifics of the accounting system of our republic. Today it is impossible not to notice the trend towards automation and modernization of systems. This also affected accounting - almost all organizations need to automate this process. Huge volumes of ledgers and endless bills, and invoices that are constantly lost, are now a thing of the past. An important condition for the development of the country is reasonableness, soundness and training. The transition to multi-level higher education should improve the quality of training. In the concrete nature of today's tasks of the republic, training of personnel for the real sector of the economy plays a special role. Currently, in the real sector of the economy, there is a growing demand for specialists of chief accountants, their deputies, senior accountants, and accountants in charge of account and expense transactions. Moreover, there is a tendency to expand the specialization of employees in the accounting sphere. Today, a qualified accountant should know not only the accounting methodology, but also various taxation schemes, tax planning methods, civil and administrative legislation, and also have practical experience as an accountant in one or several industries (production, construction, wholesale and retail trade, services, entertainment business, catering, insurance business, etc.). It is necessary for the accountant to know one or several specialized accounting programs [8].

An example is more mobile management accounting. He not only uses traditional accounting methods, but also actively implements the methodologies used in related areas of management (planning, forecasting, analysis, modeling). The main advantages of the multivariate use of tools in management accounting:

- assessment may be based on various approaches (market, investment, insurance, book value, liquidation value may be used);
- for the calculation can be used a variety of techniques and management accounting, which helps in determining different cost for different accounting purposes;
- it is possible to choose whether to use double entry and the system of accounts;
- the frequency of the preparation and content of the balance sheet and statements are determined on the basis of the principle of efficiency It is possible to compile prognostic, segmental balances using various techniques.

The development of the basic components of accounting is influenced by the emerging environment of the digital economy. Among the experts in the field of accounting, there are proposals to include perspective accounting, differential, control accounts, accounts for non-financial information in the system of accounts.

Also, it has been talked about for a long time about the possibility of using alternative double-entry systems. In addition to the digraphic and unigraphic recording methods, there are systems of triple and quadruple recording. Changes and other elements of the accounting method are possible under the influence of the progress of data processing technologies, as well as due to significant changes in accounting objects.

Accordingly, logical and expedient is the multilateral development of the methodological base of accounting, covering both the elements of the accounting method and related management activities, and ensuring the adequacy of its information product to existing and new tasks. In the conditions of development of the digital economy are subject to significant changes and accounting objects. The explanation for this is the increasing number of indicators characterizing, not only the economic side of business, but also social, environmental responsibility, systematic and quality corporate governance, the presence of non-financial objects, such as: organizational, human, innovative, reputational capital, which provide the basis for value creation.

It is also necessary to note the expansion of the range of objects due to the emergence of new hybrid and modifiable forms of assets, liabilities and capital: cryptocurrency, smart assets, smart contracts, mixed investment tools, new forms of financial transactions, electronic funds flows, virtual monetary and non-

monetary units of value, etc. Their reflection in accounting requires the formation of new principles of systematization and taxonomy of objects of accounting, highlighting recognition criteria, metrics and principles of reflection in economic information.

In terms of digitalization, in order to maintain its relevance, accounting should be positioned as an element of the system for receiving, processing and transmitting economic information. It is necessary to clearly represent the place, role and functionality of accounting in the ecosystem. Otherwise, it will be at risk of "dissolving" in modern technological and multifunctional digital information systems, since these systems are developing dynamically and rather aggressively expand their sphere of application.

Important is the internal structure of accounting. It is necessary to highlight its new and sought-after species. In this regard, the main trends are: the convergence of existing types of accounting, attempts to highlight new ones, such as strategic, adaptive, multi-purpose, creative, intellectual, etc.

The convergence of external and internal accounting will help to include in corporate reporting information on development strategies and social responsibility, the creation of economic value added in the context of business segments and the factors of its creation, the effectiveness of the management system. Separate consideration is required for ideas related to the separation of types of accounting due to the formation of specific information systems (strategic, social, actuarial, behavioral, etc.). Questions of the expediency of their allocation are debatable, but deserve consideration in connection with the impending changes.

One of the most important parts of the accounting system is the information component of the two subsystems - financial and management accounting. The reorientation from the control to the informative function, which is based on the organization of the digital transformation of the enterprise, is noted. It is necessary to develop new indicators, methods of collecting and processing financial information, as well as the sufficiency of its integration with information about other aspects of the business and the external environment.

It is also necessary to note the expansion of the range of objects due to the emergence of new hybrid and modifiable forms of assets, liabilities and capital: cryptocurrency, smart assets, smart contracts, mixed investment tools, new forms of financial transactions, electronic funds flows, virtual monetary and non-monetary units of value, etc. Their reflection in accounting requires the formation of new principles of systematization and taxonomy of objects of accounting, highlighting recognition criteria, metrics and principles of reflection in economic information.

CONCLUSION

For the time being, cloud technologies are beginning to be used by those enterprises whose management is striving to use the latest achievements in the field of IT technologies to increase their competitiveness in the modern market. At the same time, we note that cloud technologies have a great future, which today is beyond doubt. In the near future, software companies will face the need to choose an acceptable degree of cloudiness and implement a cloud strategy in accordance with their needs and the requirements of their customers.

In the conditions of "digital economy", "knowledge economy", the possibilities of an accountant and auditor expand, and the range of competencies required by these specialists is growing. The needs of employers determine the need to strengthen the orientation of the preparation of accountants to solve actual problems of accounting, analysis and auditing. This requires not only the harmonization of educational programs of universities and professional standards, but also the use in the educational process of the latest achievements of economic science, systematic professional development, as well as perfect adherence to the norms of professional ethics.

The development of the theory and improvement of accounting practices is associated with the expansion of the information potential of the existing economic space, the digitalization of the economy. At the same time, information technologies cause significant modifications both in the methodology and in the applied area of accounting science. In this regard, the transformation of accounting in accordance with new needs is a necessary step in its development. Changes and improvements of this method of accounting will help not to lose its relevance in the era of universal digitalization.

ӘОЖ 657.

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БУХГАЛТЕРЛІК ЕСЕПТЕ САНДЫҚ ТЕХНОЛОГИЯЛАРДЫ ҚОЛДАНУДЫҢ ЖАҢА МҮМКІНДІКТЕРІ

Аннотация. Технологиялар олар жататын барлық салаларды жылдамдатады. Көптеген бухгалтерлер сандық құралдарды пайдаланады және олар қағазсыз болу үшін процестерді оңтайландырады. Дегенмен, технологиялар дамып, көптеген функцияларды одан әрі автоматтандыруды жалғастырғандықтан, әңгімелер адамның қатысуынсыз есепке алудың келешегіне айналады. Нақты әлемде қаржы индустриясын өзгертетін технологиялар ешқандай да артық адам факторын жасамайды.

Оның орнына бұлт, жасанды интеллект (ИИ) және блокчейн сияқты технологиялар бухгалтерлерге - қаржылық қызметтердің барлық индустриясына - деректерді қолмен енгізуді қысқартуға және деректердің жылдамдығын, дәлдігін және сапасын арттыруға мүмкіндік береді.

Түйін сөздер: бухгалтерлік есеп, цифрлау, технологияны оңтайландыру, блокчейн.

УДК 657.

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НОВЫЕ ВОЗМОЖНОСТИ ПРИМЕНЕНИЯ ЦИФРОВЫХ ТЕХНОЛОГИЙ В БУХГАЛТЕРСКОМ УЧЕТЕ

Аннотация. Технологии ускоряют все отрасли, к которым они относятся. Большинство бухгалтеров уже используют цифровые инструменты и оптимизируют процессы, чтобы они стали безбумажными. Тем не менее, поскольку технологии продолжают развиваться и еще больше автоматизировать многочисленные функции, разговоры превращаются в перспективу учета без участия человека. В реальном мире технологии, преобразующие финансовую индустрию, никоим образом не сделают избыточным человеческий фактор.

Вместо этого такие технологии, как облако, искусственный интеллект (ИИ) и блокчейн, позволят бухгалтерам - и всей индустрии финансовых услуг - сократить ручной ввод данных и повысить скорость, точность и качество данных.

Ключевые слова: бухучет, цифровизация, технологии, оптимизация, блокчейн

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REFERENCES

[1] Karpova T.P. Buhgalterskij upravlencheskij uchet proizvodstva: koncepciya sovershenstvovaniya: avtoreferat dis. na soiskanie uchenoj stepeni doktora ekonomicheskih nauk. M., 2004.

[2] Karpova T.P., Dolgov V.A., Aleksahina L.I. Ekonomicheskie informacionnye sistemy podgotovki kadrov dlya innovacionnoj deyatel'nosti v neftyanyh kompaniyah // Transportnoe delo Rossii. 2011. № 8. S. 91-92.

[3] Zenkova M.A. Administrativno-pravovoe regulirovanie deyatel'nosti sistemy obrazovaniya v Rossijskoj Federacii // Vestnik Ural'skogo instituta ekonomiki, upravleniya i prava. 2016. S. 85-90.

[4] Majorov V.I. Administrativnaya reforma v Rossii: sovershenstvovanie gosudarstvennogo upravleniya na osnove koncepcii novogo gosudarstvennogo menedzhmenta // YUridicheskaya nauka i pravoohranitel'naya praktika. 2017. № 3 (41). S. 109-116.

[5] Siddikov A. M., Pulatova N. R. Primenenie komp'yuternyh tekhnologij v buhgalterskom uchete predpriyatij malogo biznesa v Uzbekistane // Molodoj uchenyj. 2016. №10. S. 868-870. URL https://moluch.ru/archive/114/29707/ (data obrashcheniya: 16.06.2019).

[6] Civenko M. YU. Transformacii professii buhgaltera v usloviyah razvitiya «cifrovoj ekonomiki» // Molodoj uchenyj. 2017. №48. S. 100-102. URL https://moluch.ru/archive/182/46766/ (data obrashcheniya: 16.06.2019)Sanalieva L.K., Kengzhegalieva G.B., Idelbayeva A.S., Niyazbekova Sh.U. Investigation of modern economic mechanisms for construction of the intellectual potential of the country as a moving factor of innovative economic development. BULLETIN OF NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN ISSN 1991-3494, Volume 5, Number 375 (2018), 144 – 148. https://doi.org/10.32014/2018.2518-1467.19

[7] Sanalieva L.K., Kengzhegalieva G.B., Idelbayeva A.S., Niyazbekova Sh.U. Investigation of modern economic mechanisms for construction of the intellectual potential of the country as a moving factor of innovative economic development. BULLETIN OF NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN ISSN 1991-3494, Volume 5, Number 375 (2018), 144 – 148https://doi.org/10.32014/2018.2518-1467.19

[8] Kenzhebayeva Zh.E., Sarieva A.M. Development of special mathematical and software systems analysis. News of the national academy of sciences of the republic of Kazakhstan series of social and human sciences ISSN 2224-5294, Volume 1, Number 323 (2019), 126–129. https://doi.org/10.32014/2019.2224-5294.19

[9] Dyusembaeva L.K., Babazhanova Zh.A., Bulakbay Zh.M., Nurbayeva G.Ye. Strategy of interaction of the state and small business as a factor of innovative development. News of the national academy of sciences of the republic of Kazakhstan, series of social and human sciences, ISSN 2224-5294, Volume 1, Number 323 (2019), 107–116, https://doi.org/10.32014/2019.2224-5294.16

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