

## ОБЛІК, АНАЛІЗ ТА АУДИТ

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DOI: [https://doi.org/10.32515/2663-1636.2024.11\(44\).173-184](https://doi.org/10.32515/2663-1636.2024.11(44).173-184)**Volodymyr Muravskiy**, Professor, Doctor of Economic Sciences**Pavlo Denchuk**, Associate Professor, PhD in Economics (Candidate of Economic Sciences)*West Ukrainian National University, Ternopil, Ukraine***Levko Prokipchuk**, PhD in Economics (Candidate of Economic Sciences)**Roman Hnidets**, graduate student of the Department of Accounting and Auditing*Ivan Franko National University of Lviv, Lviv, Ukraine***Refinement of Accounting Methods and Principles in Industry 5.0**

The fourth industrial revolution is replaced by Industry 5.0, which is positioned as a human-centered concept of scientific and technological development. The fifth industrial revolution clarifies the theoretical provisions of accounting in the direction of taking into account the behavioral and informational habits of accounting and management specialists, protecting environmental and public interests, optimizing the management of business activities. The methodological techniques and principles of accounting information processing in Industry 5.0 are undergoing the most significant changes.

The relationship between accounting methods and accounting principles in the context of using the latest computer and communication technologies is substantiated. The areas of improvement of methodical methods of accounting with the formation of specific principles of accounting information processing, which were updated under the influence of the formation of Industry 5.0, were determined. Such principles of accounting information processing, grouped by accounting methods, should include: documentation (openness, communication, deregulation, anthropocentrism); inventory (permanence, automatic inventory, non-contact, autonomous movement); assessment (comparability, prioritization of fair assessment, automatic reassessment, planning); calculation (simultaneity, predictability, autonomy, adjustability); double (triple) record (integration, control, security, transparency); reporting (adaptability, international flexibility, convenience, visualization).

The necessity of the complex use of the latest computer and communication technologies for the manifestation of the positive features of Industry 5.0 in terms of the implementation of specific accounting principles has been proven. The optimization of specific management accounting methods in the conditions of Industry 5.0 requires further additional research.

**accounting, Industry 4.0 and 5.0, the fifth industrial revolution, accounting methods, accounting principles, digitalization, information processing technologies**

**Statement of the problem.** Industry 5.0, which replaces the fourth industrial revolution, complements the existing theoretical provisions of accounting. Most of the key aspects of accounting theory remain relevant from the previous stage of the scientific and technological development of the economy. However, the shift in emphasis to behavioral and individual informational interests, social and environmental protection, as well as optimization of management involves clarification of the fundamental provisions of accounting. Accounting principles and methods are included in such theoretical and methodological directions of improving accounting in the conditions of Industry 5.0. Methodical methods as the main accounting tools undergo transformations with the transition to a new stage of scientific and technical development. The use of specialized theoretical accounting methods simultaneously affects its principles. Specialized principles of accounting are supplemented by principles of accounting information processing, which are most amenable to optimization changes in the conditions of the formation of Industry 5.0.

**Analysis of recent researches and publications.** Methodological aspects of digitization of accounting information processing are the theoretical basis for applied use of modern computer and communication technologies in accounting. Scientists pay considerable attention to the clarification of individual accounting methods.

Also in the scientific space there are scientific works in the field of conceptual positioning of accounting methodology by such authors as: Hohol T. A. [2], Koriahin M. V., Kutsyk P. O. [5], Lahovska O. A. [6], Kanstedal N. A. [4], Lehenchuk S. F. [7], Kaminska T. H. [3] and many others.

However, a comprehensive study of the peculiarities of the implementation of various accounting methods in the conditions of the development of the latest information processing technologies was carried out in individual scientific works. In particular, Pratama Aditya, Dwita Sany, Md. Sum Rabihah explained the mechanisms of digital transformation of accounting methodology in the direction of improving the quality of accounting information [11]. Scientists Pushkar M. and Semaniuk V. also identified promising directions for improving accounting science, including in the field of adapting accounting methodology to the requirements of the digital economy and society [12]. The balance between accounting conservatism and modernism in the revolutionary change of accounting methods in the conditions of scientific and technological development of society was explained by Abu Nassar Mohammad and other authors [1].

Widiasalwa Syadzwana and other scientists position accounting methods as connecting elements between management, automated information systems, internal control on the one hand and financial results of the enterprise on the other [14]. Odonkor Beryl and others substantiated the presence of a positive impact of artificial intelligence technology on all accounting methods [10]. Ramautar Vijanti, España Sergio and Farshidi Siamak [13] explained the perspective of the transformation of accounting methods in the direction of taking into account environmental, social and management aspects of the company's activity. Despite the existence of thorough scientific research in the field of optimization of accounting methodology under the conditions of using the latest computer and communication technologies, the emergence of the fifth industrial revolution forms new requirements for the theory and practice of accounting.

**Statement of the objective.** The purpose of the study is to transform the accounting methodology under the influence of Industry 5.0 with establishing the relationship between accounting methods, principles and the latest computer and communication technologies in the activities of enterprises.

**The main material.** The fourth industrial revolution is associated with a significant level of autonomy in the processes of collection and primary processing of credentials. Artificial intelligence technology and robotic systems automatically form an information basis for primary documentation of financial and economic events and phenomena. All processes of generation and filling of primary accounting documents take place exclusively in electronic form. Instead, Industry 5.0 qualitatively transforms the documentation process from an accounting perspective, taking into account communication processes with accounting and management specialists. In addition to automation procedures for primary data processing, significant attention in modern computer and communication technologies is paid to communication and ergonomic aspects of the activities of specialists in the field of accounting and management. In Industry 5.0, documentation as a traditional methodical method of accounting shows positive changes under the influence of fundamental principles (Table 1).

Dialog windows for entering credentials have long since turned from electronic copies of primary documents into a means of communication with staff. A significant part of mandatory details has lost its importance in filling out accounting documents. The use of artificial intelligence technology automated the processes of collecting and forming information arrays, which are subsequently used to generate typical forms of primary documentation. In other words, accounting documents, which in the classical sense are a combination of regulated details, are formed from the database already after processing accounting information.

Table 1 - Principles of documentation and document flow in accounting in the conditions of Industry 5.0

№	Principle	Understanding in the conditions of Industry 5.0
1.	Openness	Rejection of the isolation of document circulation and openness of the company's information system thanks to the block-chain structuring of accounting data.
2.	Communicability	Electronic copies of primary documents are a means of communication interaction with accounting and management specialists.
3.	Deregulation	Minimizing the need for the mandatory use of standard forms of primary documents in favor of a free format for generating accounting documents, taking into account the list of mandatory content details.
4.	Anthropocentrism	The process of creating electronic documents and their use is as close as possible to the natural communication process, taking into account the information and ergonomic priorities of users.

*Source: generated by the author*

In Industry 5.0, the very process of initial processing of accounting data becomes ergonomic and comfortable for accounting and management specialists. With the use of chatbots based on AI, the accounting process is as close as possible to natural communication. Through the system of visual, text, and voice interaction, accounting employees can enter primary data and give commands regarding their processing.

With the development of neurocomputer technology, all information systems, including accounting, undergo evolutionary changes. Leading developers of neurochips are already successfully implementing methods of informational interaction with technical means using the cognitive abilities of individuals. In this case, the communication process of information processing immediately takes place in the brain of a specialist with the transfer of data to specialized software for the automation of accounting and management functions. As a result, information processes come as close as possible to the natural mental abilities of each individual specialist in a certain field.

Maximizing convenience in the communication processing of accounting information by specialists eliminates the need to use regulated forms of primary documents. If necessary, an arbitrary primary document can be generated from a single database of accounting data as a certain list and sequence of displaying information details. In this case, the need to develop new standard forms of primary documents in electronic or paper form is significantly minimized. However, in order to ensure information perception and legal confirmation of events and phenomena in the company's activities, it is necessary to define a list of mandatory information content. In other words, not the form of the primary document, but its information content should be subject to regulation. Deregulation ensures maximum adaptability of perception of primary data by different groups of users. Also, minimizing the importance of formatting primary documents opens up opportunities for data visualization, especially in the context of the development of virtual and augmented reality technologies. Accounting virtualization eliminates standardization in the process of providing and interpreting accounting information.

Industry 5.0 involves a new use of blockchain technology in primary documentation and information flows of the enterprise. Block-chain structuring of data creates prerequisites for open document flow in the enterprise. Reliable protection, data coding and fragmentation into small elements that cannot be used by outsiders, eliminates the isolation practice of modern enterprises. Before the spread of Industry 5.0, accounting and management specialists separated the information flows of the enterprise from the global information space as much as possible. Blockchain technology provides an open document flow, which involves the

decentralized accumulation and use of accounting information. Separate accounting in the information system of the enterprise in the conditions of Industry 5.0 is gradually degrading in favor of openness, publicity in combination with reliable cyber security. More about anti-isolation techniques in combination with cyber protection of accounting information is given in the monograph [9].

Along with documentation, the process of inventory control changes positively. Inventory in Industry 5.0 is transformed into automatic inventory control in cooperation with accounting specialists. All physical processes performed by responsible persons are reduced to a minimum. In the table 2, the principles of accounting information processing during inventory in Industry 5.0 are given.

Table 2 - Principles of inventory in accounting in the conditions of Industry 5.0

№	Principle	Understanding in the conditions of Industry 5.0
1.	Permanency	Inventory control takes place on a continuous basis.
2.	Auto inventory	Most intangible assets and non-current tangible assets are able to self-identify and report their status to responsible persons.
3.	Contactless	Fixed physical assets can be inventoried contactlessly using radio frequency identification technology or cellular networks.
4.	Autonomy of movement	Material values can be moved within the enterprise with the help of robotic transporters with the appropriate implementation of accounting and control procedures.

Source: generated by the author

All tangible objects to which RFID tags can be attached and intangible objects capable of self-identification are subject to autonomous control. Radio frequency identification technology provides remote monitoring of the movement of movable and immovable material assets within the scope of the company's radio field. Marked objects are automatically identified upon arrival at the enterprise. All subsequent changes related to the movement of these accounting objects or their consumption are automatically recorded in the accounting department of the enterprise. Responsible persons must be automatically notified of significant changes in controlled objects. Based on this information, accounting and management specialists are able to influence the process of moving material objects. As a result, Industry 5.0 creates prerequisites for the autonomous implementation of economic activity without the participation of the company's personnel, but only under their control. In other words, the movement of material values (especially their internal movement) takes place according to the developed algorithm completely autonomously with the help of robot conveyors with the corresponding fixation in the company's accounting system. Instead, information about relevant business processes immediately becomes available to employees of accounting and management units.

The principle of self-inventory of intangible assets is slightly different from the control check of tangible objects. Modern software, rights of use or objects of intellectual property can be informationally synchronized with the relevant information services. Through electronic mechanisms for checking the validity, validity period or availability of updates, it is possible to carry out inventory control of the relevant accounting objects. In the automatic inventory system, it is advisable to provide for the possibility of information requests to electronic services regarding the current state of intangible objects. With the confirmation of data on intangible assets, their inventory can be automatically carried out. In this case, the intangible assets themselves, which are accounting objects, carry out auto-monitoring of the current state. In the case of detecting an actual update for a certain software, it is advisable to send a request to the responsible specialists for permission to carry out the relevant

transaction. It is advisable to automatically capitalize the cost of renewal or purchased additional lost modules in the cost of intangible assets under inventory control.

The same applies to the updating of information on the performance or compliance with the requirements of other intangible assets. In case of detection of deviations of the current state of intangible objects from reference information in profile electronic systems, there is a need to update them. It is advisable to add all the costs of bringing accounting objects to the state of relevance and novelty to their current value. Accounting and management specialists monitor the process of permanent verification of the state of intangible assets and, if necessary, initiate the process of updating them.

Most completely, Industry 5.0 changes the processes of calculation and evaluation in accounting. Modern computer and communication technologies turn the accounting assessment into a communication process of specialists with artificial intelligence, which is able to interpret all the socio-economic circumstances of the enterprise's functioning. The combination of experience and qualifications of accounting and management personnel with the comprehensiveness and information availability of accounting information processing algorithms provides the most reliable assessment of events and phenomena in the activities of enterprises. The principles of accounting information processing during accounting evaluation are given in table. 3.

Table 3 - Principles of valuation in accounting in the conditions of Industry 5.0

№	Principle	Understanding in the conditions of Industry 5.0
1.	Comparability	Modern computer and communication technologies are able to evaluate and compare the characteristics of the accounting object based on the search for analogues.
2.	The priority of a fair assessment	A fair estimate is preferred, as well as an expert and market price based on gathering information about an active competitive market.
3.	Auto-reevaluation	Objects are automatically reassessed when the internal and external conditions of the company's activity change.
4.	Planning	The assessment is used to plan the company's activities with forecasting of financial consequences based on the results of socio-economic events.

*Source: generated by the author*

Artificial intelligence is able to collect available accounting information from all available sources and prepare draft decisions regarding the assessment of certain objects. Prepared versions of evaluation projects are transferred to the accounting and management personnel for choosing the most optimal method of evaluation and its final approval.

Assessment in Industry 5.0 becomes an important tool not only for providing a value dimension to financial and economic processes at the enterprise. Accounting evaluation creates prerequisites for forecasting all types of enterprise activities. As for the initial estimate, information about most of the costs that are included in the production cost is automatically recorded in the accounting system. The accountant has a mechanism for choosing the most effective method of calculating the cost of production. From the known methods of estimating the initial cost of products, you can choose the option most adapted to the internal and external conditions of the enterprise's functioning.

Company employees are able to assess the expediency of using a certain method of cost calculation from various available methods (direct costs, total costs, normative method, director-costing, Kaiser-costing, etc.). The initial cost of finished products can be estimated simultaneously according to several options, and in the future, the relationship between financial and economic processes and the financial results of the enterprise can be established.

Modern computer and communication technologies are able to carry out parallel processing of accounting information using various methods of estimating the bases of additional costs of working time and efforts of accounting and management personnel. As a result, the principles of accounting information processing when calculating and estimating from the accounting perspective are quite similar (Table 4).

Table 4 - Principles of cost calculation in accounting in the conditions of Industry 5.0

№	Principle	Understanding in the conditions of Industry 5.0
1.	Simultaneity	The cost of finished products (works, services) can be simultaneously determined in different ways to establish the relationship between production and enterprise management.
2.	Predictability	Artificial intelligence is able to form forecasted accurate cost calculations even before the end of the production cycle or reporting period.
3.	Autonomy	Most information about incurred expenses can be collected completely autonomously without the direct involvement of accounting specialists
4.	Adjustability	The cost price of finished products (works, services) can be quickly adjusted taking into account current changes in the internal and external conditions of the company's activity, bringing planned indicators to actual costs.

Source: generated by the author

Through the Internet, artificial intelligence is able to collect all available information about the cost of similar products from competitors. Based on the accumulated information about the manufacturer, market conditions and consumer properties of a certain product or service, it is advisable to provide a detailed analysis of the enterprise's production capabilities in the artificial intelligence algorithm. Without having confidential management accounting information about the activities of competitors, with a certain level of probability it can be generated with the help of artificial intelligence. In other words, modern computer and communication technologies can provide approximate financial and economic information about the functioning of a competitor, as well as the costing of products manufactured by him (services provided, works performed). As a result, confidential accounting information can be reproduced provided that there is an adequate amount of open data in the global information space regarding the activities of the enterprise that is the object of verification and other similar business entities.

A similar method of predicting the value of analogues using artificial intelligence can be used for the valuation of non-current assets. This evaluation method is as close as possible to the method of determining the fair price, which is based on the existence of a free and open market. The fair valuation method involves reflecting the value of the accounting object according to the value of analogues in the market. Artificial intelligence is able to offer accounting and management specialists evaluation projects for comparative evaluation based on the selection of the most similar reference samples from the Internet.

A unique functional possibility of artificial intelligence, which corresponds to the principles of Industry 5.0, is the consideration of social, environmental and management aspects of enterprise activity in the accounting assessment. Modern computer and communication technologies can predict the negative impact on the environment and the social sphere of various ways of implementing financial and economic actions by the enterprise. Depending on the chosen variant of conducting business activities, it is possible to plan the need and cost of: environmental permits or fines; compensation for damage caused to

the environment; additional equipment for neutralization of harmful emissions; investments in renewable energy sources; involvement of experts or organizations of specialized laboratory or eco-protection departments; organizations of ecologically clean production, etc. The situation is similar in the social sphere, which requires actions to minimize social tension or, on the contrary, to meet the public needs of citizens and protect the rights of the company's employees.

Each of the areas of implementation of environmental and social activities leads to the occurrence of additional costs, which should be included in the planned cost of finished products. Full accounting assessment of all aspects of the enterprise's functioning ensures the most reliable costing of products (works, services) for effective management of financial and economic processes.

Positive transformations in Industry 5.0 are also experienced by double entry as a fundamental methodical method of accounting. Double entry in the system of accounting accounts in the conditions of Industry 5.0 is transformed into an innovative system of structuring and synchronizing records. Since the period of the active formation of the fourth industrial revolution, double entry has been compared to the algorithm of blockchain technology. At the heart of both methods of information systematization is the idea of simultaneous recording of data in several accumulative (two or more) registers, which are connected by a semantic link in order to establish the reliability and integrity of information arrays. In the conditions of Industry 5.0, which is associated with the mass application of blockchain technology, the idea of a triple account becomes relevant.

The triple accumulation of accounting data turns accounting accounts into a universal mechanism for the integration of diverse information systems and functions in business management. Blockchain technology provides not only the recording of data about a certain financial and economic event or phenomenon in accounting accounts, but also in other storage devices that can be used by internal and external stakeholders. In other words, the processed accounting information about the company's activities is recorded simultaneously in many databases that complement each other and are integrated into a single information space.

The functioning of such an accounting system is based on four fundamental principles, which are the methodological basis of the information subsystem of Industry 5.0. These principles include: the well-founded principle of integration, as well as control, security and transparency (Table 5).

Table 5 - Principles of cost calculation in accounting in the conditions of Industry 5.0

№	Principle	Understanding in the conditions of Industry 5.0
1.	Integration	A combination of financial and management accounting, financial and non-financial indicators, taking into account social, environmental and management aspects of activity, while simultaneously informing internal and external stakeholders.
2.	Control	Internal and external control of credentials based on access to a reliable and independent data source.
3.	Security	Ensuring economic and information security of the enterprise through block-chain structuring of data and cyber protection of the accounting system.
4.	Transparency	Free access and transparency of accounting information for internal and external stakeholders.

*Source: generated by the author*

All four principles of triple-entry based on blockchain technology are interconnected and complementary. This shows the integrating role of double, and in Industry 5.0 – triple

recording. Through the integration of all information services around accounting information, the principle of security is realized. The simultaneous recording of information arrays in different storage locations ensures the stability of the enterprise against internal and external information threats. An information system built on blockchain principles cannot be destroyed, and damaged information elements can be restored from alternative sources. More about the cyber protection of the accounting system based on blockchain technology is given in the monograph [9].

Triple recording of credentials provides reliable control over them. It is advisable to record each financial and economic event or phenomenon through a change in the balance on two accounting accounts and in the control register. It is advisable to provide access to such a register in a limited mode to internal and external controlling units.

In this case, control subjects should not request access to the system of accounting accounts, but receive data from control databases. Such control registers are able to contain much more accounting information compared to a classic set of accounting accounts involved in double entry.

Integrated databases can be used not only by control institutions, but also by other internal stakeholders. Employees, various divisions of the enterprise, trade union committees and other users can promptly receive accounting information simultaneously with their display on accounting accounts. As a result, the transparency of accounting information is ensured through the mechanism of its initial receipt even before the moment of transformation through the mechanism of double recording. That is, with the display of accounting data on accounting accounts, deliberate distortion or accidental distortion of accounting information may occur. Triple entry prevents the adverse influence of interested parties on the reliability of accounting information consumed by internal stakeholders.

A similar principle is the basis for ensuring transparency and flexibility of accounting information for external users. External stakeholders can be provided with complete accounting information with the appropriate level of reliability, which is ensured by minimizing external influence on the accounting system due to the implementation of triple entry. All collected accounting data using triple entry form an integrated database based on the principles of "Big data", from which external stakeholders can obtain information about various aspects of the enterprise's functioning. The presence of significant arrays of accounting data contributes to the adaptive formation of reporting documents in accordance with the informational interests and priorities of users. Such diverse interests include environmental, social and managerial aspects of business activity, which are difficult to reflect in the classical system of accounting accounts. In the future, it is advisable to use an integrated database based on triple recording using blockchain technology to generate electronic integrated reports.

The process of preparing and publishing reports is evolving along with the development of virtual and augmented reality technologies. Similarly, prior to the processing of primary data through the system of electronic documents, the processing of reporting documents in electronic format can take place, which makes it possible to form the principles of accounting information processing when generating reports in the conditions of Industry 5.0 (Table 6).

Industry 5.0 sets modernized requirements for electronic reports, which, in addition to versatile content, must meet ergonomic, graphic and semantic standards. Integrated reports contain information about all the activities of the enterprise, which can be of interest to various groups of stakeholders. First of all, it is expedient to include the social, environmental and managerial aspects of the functioning of enterprises in the conditions of the fifth industrial revolution.



Table 6 - Principles of accounting reporting in the conditions of Industry 5.0

№	Principle	Understanding in the conditions of Industry 5.0
1.	Adaptability	The form and content of reporting documents are maximally adapted to the information needs and access rights of stakeholders.
2.	International flexibility	Reporting is freely transformed into variable formats taking into account national and international requirements, as well as different currencies, macroeconomic indicators and regulations of each country.
3.	Convenience	Electronic reporting documents must be understandable for users without special knowledge and competences in the field of accounting, taxation and control.
4.	Visualization	The maximum involvement of virtual and augmented reality technologies visualizes the reported indicators for their better perception and interpretation.

Source: generated by the author

The release of virtual and augmented reality glasses by leading technogiants creates the prerequisites for maximizing convenience in the interpretation of accounting information. The ultimate goal of Industry 5.0 is the possibility of processing reporting information by persons who do not have specialized knowledge and competences in the field of accounting, taxation and control. The use of graphic elements, video materials, sound accompaniment, dialogue forms, textual explanations of indicators, etc. ensures the maximum adaptability of electronic reporting documents to the behavioral and consumer preferences of stakeholders. In addition, electronic reporting documents can be freely transformed into arbitrary forms with variable indicators, in different foreign currencies and units of measurement. The virtualization of the processing of reporting forms turns the processing of reporting into an information process that is as similar as possible to natural communications between people. More about the content of electronic integrated documents is discussed in the monograph [8].

Innovative computer and communication technologies are used to clarify methodological techniques and principles of information processing in accounting. In fig. 1. the displayed matrix scheme for the clarification of methodical process accounting in terms of the use of various technologies for processing accounting information.

It is possible to trace a certain dependence between the type of computer and communication technologies and changes in the principles of accounting information processing. In particular, artificial intelligence-oriented technologies apply to most methodological accounting techniques, as they can complement accounting specialists in the implementation of all functional duties. The technology of the Internet of Things and robotic systems is focused on the automatic collection and documentation of account data. Instead, the technologies of digital duplicates are aimed at reliable costing of products, augmented and virtual reality – processing of primary and reporting documents, Internet communications – document circulation and accounting evaluation. The most significant influence on the processes of data structuring, grouping on accounting accounts and other registers is carried out by blockchain technologies, as well as related cloud computing and "Big data".

Summarizing the directions of transformation of the theoretical provisions of accounting, it should be emphasized that all computer and communication technologies are recommended to be used simultaneously for the transition of business activities to the principles of Industry 5.0. In other words, in order to obtain all the benefits from the achievements of the fifth industrial revolution, it is necessary to introduce a complex of innovative technological developments into the company's activities, which relate to the transformation of all methodological techniques and principles of accounting.

**Conclusions and prospects for further researches.** Industry 5.0 is positively changing the fundamentals of accounting. The development of the fifth industrial revolution occurs due to the actualization of new areas of use of innovative computer and communication technologies.

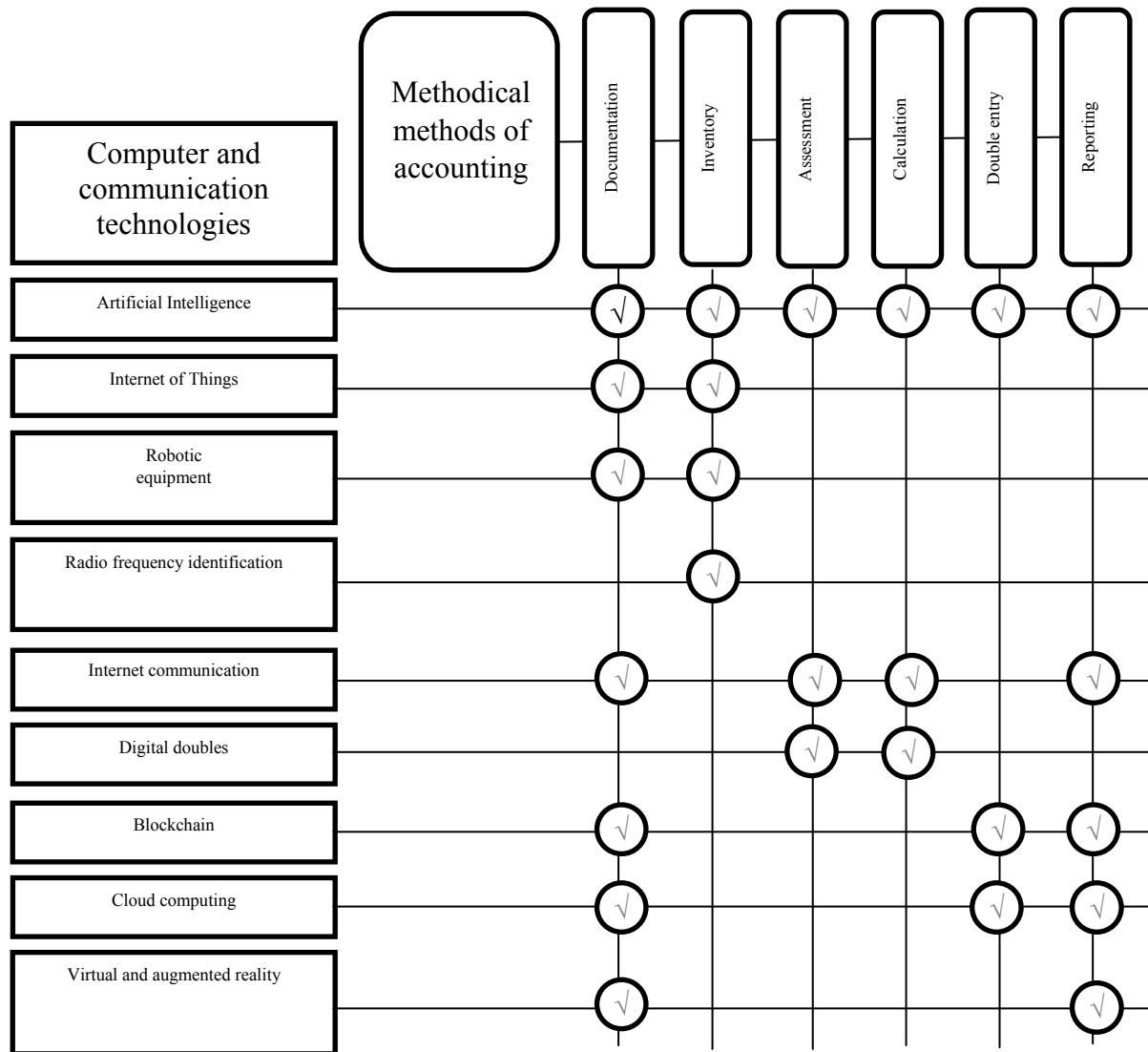


Figure 1 - The matrix of application of information processing technologies for the implementation of methodical methods of accounting

Source: generated by the author

In accounting, the implementation of the latest information processing technologies leads to the clarification of methodological techniques and the formation of specific accounting principles in the conditions of Industry 5.0.

Such principles of accounting information processing, grouped by accounting methods, should include: documentation (openness, communication, deregulation, anthropocentrism); inventory (permanence, automatic inventory, non-contact, autonomous movement); assessment (comparability, prioritization of fair assessment, automatic reassessment, planning); calculation (simultaneity, predictability, autonomy, adjustability); double (triple) record (integration, control, security, transparency); reporting (adaptability, international flexibility, convenience, visualization).

There is a direct relationship between the type of computer and communication technologies and changes in the principles of accounting information processing. Various information processing technologies are used in the implementation of accounting methods in the conditions of Industry 5.0: for documentation – the Internet of Things, robotic equipment; inventory – radio frequency identification, calculation – digital duplicates; assessments –

Internet communications; double (triple) recording – blockchain, cloud computing; reporting – virtual and augmented reality and others. Active use of artificial intelligence technology in various software and technical solutions is characteristic of most accounting methods. In order to obtain all the benefits from the achievements of the fifth industrial revolution, it is necessary to introduce a complex of innovative technological developments into the company's activities, which relate to the transformation of all methodological techniques and principles of accounting.

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**В.В. Муравський**, проф., д-р екон. наук

**П.Н. Денчук**, доц., канд. екон. наук

*Західноукраїнський національний університет, м. Тернопіль, Україна*

**Л.І. Прокіпчук**, канд. екон. наук

**Р.З. Гнідець**, здобувач кафедри обліку і аудиту

*Львівський національний університет ім. Івана Франка, м. Львів, Україна*

### **Уточнення облікових методів та принципів в Індустрії 5.0**

На зміну четвертій промислової революції приходить Індустрія 5.0, яка позиціонується людиноцентричною концепцією науково-технічного розвитку. П'ята промислова революція уточнює теоретичні положення бухгалтерського обліку у напрямку врахування поведінкових та інформаційних звичок облікових та управлінських фахівців, захисту екологічних та суспільних інтересів, оптимізації управління підприємницькою діяльністю. Найсуттєвіших змін зазнають методичні прийоми та принципи обробки облікової інформації в Індустрії 5.0.

Обґрунтовано взаємозв'язок між методами бухгалтерського обліку та обліковими принципами у контексті використання новітніх комп'ютерно-комунікаційних технологій. Визначено напрямки удосконалення методичних прийомів обліку з формуванням специфічних принципів обробки облікової інформації, що актуалізувалися під впливом становлення Індустрії 5.0. До таких принципів обробки облікової інформації, згрупованих за обліковими методами, доцільно віднести: документування (відкритість, комунікаційність, дерегламентація, антропоцентризм); інвентаризація (перманентність, автоінвентаризація, безконтактність, автономність переміщення); оцінка (порівнюваність, пріоритетність справедливої оцінки, автопереоцінка, плановість); калькулювання (одночасність, предиктивність, автономність, коригованість); подвійний (потрійний) запис (інтегрованість, контроль, безпека, транспарентність); звітність (адаптованість, інтернаціональна гнучкість, зручність, візуалізація).

Доведено необхідність комплексного використання новітніх комп'ютерно-комунікаційних технологій для прояву позитивних особливостей Індустрії 5.0 у частині реалізації специфічних принципів бухгалтерського обліку. Подальших додаткових досліджень потребує оптимізація специфічних методів управлінського обліку в умовах Індустрії 5.0.

**облік, Індустрія 4.0 та 5.0, п'ята промислова революція, методи обліку, принципи обліку, цифровізація, технології обробки інформації**

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