

## **CHAPTER 18**

### **ACCOUNTING IN THE DIGITAL ECONOMY: CONVERGENCE OF APPROACHES**

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#### **INTRODUCTION**

Global information and communication networks (Internet, Intranet, Extranet, others), with unlimited possibilities of operations with different types of information (text, audio, video, etc.) in the virtual space, contribute to the emergence and development of innovative technologies. Based on it, respective type of relations is formed at an enterprise between business processes and with participants (contractors) of the external business environment. The rapid growth of digital information, use of E-money, transformation of business operations to the electronic environment have led to significant change of international economics, traditionally oriented only to economic growth, towards new «digital» format of social being in information space, where global information networks are dominant communicational channels.

OECD (Organization for Economic Cooperation and Development) indicates basic components of digital economy such as<sup>1</sup> supporting infrastructure (hardware and software, telecommunications, networks, etc.), e-business (conducting business activities and any other business processes via computer networks); e-commerce (goods distribution via the Internet).

The great majority of modern enterprises in any way is connected with information systems and technologies based on global networks use. In light of this, not accession into global digital space, but creation of digital information space reflecting real activity, at the enterprise has a strategic impact.

Modern accounting continues to evolve as it has a high degree of adaptability to constantly changing external environmental conditions. On the other hand, accounting can be indicated as one of the most conservative sciences, which try to maintain their fundamental

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<sup>1</sup> The Global Competitiveness Report 2016-2017, World Economic Forum.

principles and require a long period of transformation. It causes complexity of making qualitative changes in accounting approaches and accounting system of the enterprise to synchronize evolutionary changes in accounting with the digital economy emergence, complicating of economic relations according to the integration of national economies, increasing user requirements for the quality of accounting information, emergence of new economic theories and concepts of management, formation of global information and communication environment, rapid development of technical systems and information systems.

Investigations of scientists underlie the modern stage of accounting development for justification new updated paradigm according to Ukrainian society, which is at the interface of economic, humanitarian, cultural, and information bases. At the present time Ukrainian business demonstrates examples of successful practices in many sectors of the economy, which allows to state the final and irreversible reformatting of human consciousness and the transformation of the traditional accounting system focused on strict control and centralized management, on the analytical accounting system designed for the management process informational support<sup>2</sup>

Therefore, setting of objectives dictates to think through a range of categories and concepts of accounting, applied research on the construction and operation of the enterprise accounting system in the digital economy, aimed at addressing emerging issues and focused on adequate results.

### **18.1. The evolution of the accounting system: historical issue**

Fundamental patterns of social development based on of a wide range of factors from human consciousness to the production organization, economic activity, scientific and technological progress, social and cultural relations, determine direction of evolutionary transformations of the enterprise accounting system. Let's present a theoretical substantiation of the enterprise accounting system evolution.

The idea of mechanization-automation-informatization-digitalization of accounting appeared simultaneously with information technologies and transformed into a single option of reality of digital economy. In the Soviet period, from 50-ss of the XX century, machine

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<sup>2</sup> Yatsenko, V. (2018). Ukrainian Company Cost Accounting System Development from the Evolutionary Theory Position. CEUR Workshop Proceedings, pp. 207-221.

accounting was born, based on the theory of complex mechanization and accounting automation. According to the requirements of centrally planned economy, the system of accounting was strictly regulated and fully standardized, which had made possible to achieve large-scale implementation of the tabular-punch card form of accounting and the use of numerical engineering in accounting. In the Western world, vice versa, the technical means were improved to solve many multifaceted tasks by algorithmizing the search for a solution.

Pre-industrial society had existed for more than 10,000 years and accounting focused mainly on agricultural. Two centuries of industrial society preceded the emergence of management accounting at the end of XIX century. Within 100 years of management accounting, many methods and techniques emerged and proved their effectiveness, however the subject area of accounting did not go out the internal processes of the enterprise.

Since the mid-50s of the XX century, two obvious tendencies appeared in international economics. Firstly, coal mining, machine and shipbuilding and other industries were being moved to developing countries. Secondly, radical new industries, mainly science-intensive such as computer, space, communication and others came up in developed countries. Consequently, scientific and technological progress accelerated, employment structure was changed, new mentality of the great majority of people was formed. In the 1970s it started a conversation about new post-industrial economy.

At that time, automation was the main focus of accounting improvement, meant processing of accounting information by technical means<sup>3</sup>.

Professor Y. Kuzminskyi thinks: «Due to the automation of accounting, first of all, the qualitative characteristics of this management area are improved, in particular accuracy of accounting, reliability, analytical accounting information, errors reduction»<sup>4</sup>.

The advantages of automation include a database that displays all the necessary information about the operation of the enterprise in real time; easy, fast and clearly differentiate access to information for any employee; simplicity and accuracy of reporting; ability to quickly obtain

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<sup>3</sup>Sopko V.V. (2011). Informacijni tehnologiji v organizaciji oblikovogho procesu.[ Information technology in organizing a regional process]. *Actual problems of economics*, vol. 1, pp. 205–211.

<sup>4</sup> Kuzminskyi Yu. (2011). Otsinka efektyvnosti vprovadzhennia informatsiinykh tekhnolohii u bukhhalterskyi oblik [Evaluation of the efficiency of introduction of information technologies in accounting]. *Accounting and Auditing*, vol. 7, pp. 27–31.

information allowing management to make more reasonable decisions; improving general performance of the enterprise<sup>5</sup>.

Automation of accounting of the enterprise will allow: to use a database that reflects all necessary information about the activity of the enterprise; clearly distinguish access to information for any employee; to form reliable reports on the enterprise activity; quickly obtain information for its further processing by management to make more reasonable decisions; increase the efficiency of the enterprise in general<sup>6</sup>.

After personal computers jointly with related software appeared and became widespread, people started talking about computerization of accounting. Background of digital economy included: further implementation of high-end technologies, including computer and communication technologies, in all aspects of life; increasing of economic and social value of information due to growth of volume of information and requirements for its retention and transfer; transformations in infrastructure caused by globalization processes. In recent years, concept of E-accounting has been actively discussed as the main direction of information support improvement of the management system<sup>7</sup>.

Banks are traditionally at the forefront of developing new items, offering e-banking services to businesses – a modern, multifunctional remote service system that allows to manage accounts for 24-hour in real-time from anywhere in the world, using information and communication technologies and networks.

State strategy for the development of electronic administration of all relationships between business entities with State Fiscal Service, the Pension Fund, the State Statistics Service and others has been developed and is being implemented.

It is possible to carry out effectively marketing research of supply of inventories (works, services) in the market, place information about the needs of the enterprise, conduct electronic auctions, set up contracts, discuss terms of delivery and terms of payment, draw up primary documentation for payment and receipt of production inventories

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<sup>5</sup> Gharkusha S.A. (2012). Avtomatyzacija oblikovykh procesiv: vprovadzhennja ta perevaghv roboty systemy [Automation of accounting processes: implementation and benefits of the system]. *Bulletin of Sumy National Agrarian University. Series: Economics and Management*, vol. 4, pp. 60–65.

<sup>6</sup> Tkalj Ja.S. (2014). Osoblyvosti vykorystannja informacijnykh system i tekhnologij v obliku [Features of using information systems and technologies in accounting]. *Bulletin of Berdyansk University of Management and Business*, vol. 2, pp. 127–130.

<sup>7</sup> Neskhodovsijvi I.S. (2010). Elektronnyj oblik yak osnovnyj napriam udoskonalennja informacijnogho zabezpechennja systemy upravlinnja [Electronic accounting as the main direction of improvement of information support of management system]. *Bulletin of Zhytomyr State Technological University. Series: Economics, Management and Administration*, vol. 3 (53), pp. 73–77.

(works, services) through web pages, e-mail, social networks using interpersonal communications of the company with suppliers.

E-commerce allows to expand the geography of the delivery and selling to the international (mega) level, find the necessary supplier (buyer) even if it is the only one in the world; establish transparent, democratic relationships with counterparties; exclude commercial and government intermediaries; optimize both purchase prices for raw materials and prices for final products.

The study of modern enterprise characteristics allows us to identify the creation of a radically new model of economic activity, which focuses on the external (macro-, mega-) and internal (micro-) environment. In this case, information and communication technologies and networks as unique and basic means of virtual space, are connecting links between internal and external environment aimed at enhancing effectiveness of existing and / or development of new market elements for the greatest socio-economic impact.

Nowadays, information systems of new generation offer two work in modes: off-line and on-line. In fact, off-line mode reflects the computerization of accounting, because it performs primary documentation, generates, processes, stores electronic data sets, defines the reporting performance of the enterprise. However, the transfer of documents through external storage does not require legal confirmation. Document created in the information system in off-line mode, acquires a legal state only in printed copy with signatures and stamps.

To make information systems work on-line, except computer and software, it requires technical equipment and provider for an access to the global networks, usually the Internet. It creates fully functional e-accounting system, since the documents are transmitted and have legal status in electronic form due to electronic signature, reference to electronic databases or by other means.

Second difference between e-accounting and computerization is geography and time of access to electronic databases. E-accounting provides real-time operation of the information system from anywhere in the world.

The interest in analyzing of information and computerization levels at domestic enterprises has still been popular over a long period<sup>8, 9</sup>.

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<sup>8</sup> Titova O., Borodina O. (2014). Analiz obgruntovanosti informatyzatsii ta kompiuteryzatsii diialnosti silskohospodarskykh pidpriemstv [Analysis of the validity of informatization and computerization of agricultural enterprises]. *Ekonomichniy analiz*, vol. 18 (2), pp. 262–268.

<sup>9</sup> Levytska S., Romaniuk A. (2010). Avtomatyzatsiia bukhalterskoho obliku yak vyznachalniy faktor efektyvnosti oblikovoi systemy vitchyznianykh pidpriemstv [Automation of accounting as a determining

Thus, the transition of the economy to the next stage of development – digital, means integration of e-accounting not only in the general accounting and analytical system of the enterprise, but also in the global virtual space. Moreover, the evolutionary transformations within the economic and social structures associated with globalization processes, large-scale computerization, rapid development of computer and communications technologies, the increase of e-business, determine direction of deep transformation of accounting and the formation of accounting data in respect with digital requests of the economy. The scientific community has a dominant opinion about the need to transform enterprise accounting in line with the electronic environment, but scientists estimates the impact of computer technologies, information systems and communications technologies on the accounting system in different way.

## 18.2. Accounting model in digital economy

In this study, we will specify digital economy as economic activity which, contrary to traditional one, is defined by network consciousness and dependent on virtual technologies.

Hura N. (2011). proposed a structural model of the accounting system at the enterprise with main components such as accounting objects, method elements, information in primary documents, accounting registers and reports. Moreover, he attributes theoretical and methodological elements to the components of the system, namely purpose, task, object, axioms, principles, functions, elements of the method, techniques. Meanwhile, the author refers to the organizational elements items such as document flow, form of accounting, the use of computer technologies, the organization of work. Relevant specialists are considered as relevant elements of the enterprise information system<sup>10</sup>.

Charles Hoffman (2017) mentions that teaming humans and computers together and leveraging the strengths of each is how work will get done in the future<sup>11</sup>.

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factor of the efficiency of the accounting system of domestic enterprises]. *Visnyk Natsionalnoho universyte tu vodnoho hospodarstva ta pryrodokorystuvannia*, vol. 50, pp. 156–163.

<sup>10</sup> Ghura N. (2011). Bukhghaltersjkyj oblik jak skladna informacijna systema [Accounting as a complex information system]. *Bulletin of Taras Shevchenko National University of Kyiv. Economics*, vol. 130, pp. 12–15.

<sup>11</sup> Hoffman. Ch.: Accounting and Auditing in the Digital Age. <http://xbrl.squarespace.com/journal/2017/6/28/accounting-and-auditing-in-the-digital-age.html>. (accessed 28 Marc 2019)

Information software complexes have become the main component of the accounting process at enterprises, which are impossible to imagine modern accounting. Software and data support are as important for accounting as the organization of the accounting process, highly skilled workers, the system of workflow, etc.

Well-defined and well-chosen software systems for automation of accounting provide the highest efficiency of enterprise management as a whole and organization of accounting process in particular. The use of computer technologies in the accounting process ensures its reliability, clarity and efficiency. This makes possible to monitor the status of settlements, assets and liabilities at any time<sup>12</sup>.

The great majority of scientists from different countries considers accounting as a system<sup>13</sup>.

Overall, system approach as a methodology of systems research creates a base of systems theory in general, the basics of cybernetics, information theory, and the concept of system management meaning the enterprise as a whole organism in which the accounting system is part. At the same time, systematicity considers accounting as a set of elements in a set of relations between them.

Domestic practice traditionally uses a structured Plan of accounts a hierarchical structure for system (for example, assets accounting, intangible assets and capital investments accounting, inventory records, payroll accounting, etc). This approach is used in almost all well-known textbooks on accounting (financial) accounting and the structure of the enterprise accounting system. For accounting systems of majority of enterprises, reflecting business activity on synthetic and analytical accounts is standard, and similar accounting procedures are clear and regularly used in practice.

The accounting system differs significantly from other systems primarily in the Plan of Accounts. In case of keeping records by several standards simultaneously (national, IFRS, US GAAP), will mean creation of accounting systems within the a single accounting system of the enterprise. Each accounting system will be based on the relevant standards of the Plan of Accounts.

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<sup>12</sup> Polishchuk O. (2014). Osoblyvosti zastosuvannia kompiuternykh tekhnolohii dlia avtomatyzatsii bukhhalterskoho obliku na pidpriemstvakh [Features of computer technology to automate accounting in enterprises]. *Economic sciences. Series: Accounting and Finance*, vol. 11 (2), pp. 287–293.

<sup>13</sup> Balanjuk, I. (2015). Bukhghaltersjkyj oblik v informacijnij systemi upravlinnja pidprijemstvom [Accounting in the enterprise information management system]. *Scientific Bulletin of Kherson State University. Ser.: Economic Sciences*, vol. 17 (1), pp. 146–149.

A functional (functional-structured, functional-oriented) approach of the organization and management of the enterprise has been dominant since its introduction by Taylor and is already considered as a classic. He identified the creation of the enterprise accounting system as a functional subsystem. The purpose of an accounting system is to perform a management function, namely to provide the necessary information for management of accounting information. On the other hand, it is the distribution of actions, functions, rights and responsibilities of accounting staff with their consistent approval and recording in service instructions, workflow schedules, etc. As a result, the structure of the accounting system is focused on a hierarchical structure on the one hand and its functional integrity on the other.

For example, merging businesses into Groups, corporations, and holdings requires corporate accounting, which, as an accounting system, supports the accounting data formation in general and individually for each enterprise, division, workshop, service, etc. In other words, individual stable elements, the relationships between them, and capabilities are identified in the system. Therefore, the hierarchical structure characterizes the corporate accounting system in statics. It allows to evaluate the internal state of the system and system communications. Each element (subsystem) of corporate accounting performs its own specific functions and at the same time, focuses on systemic (informational, control, analytical). A functional approach allows to explore a complex accounting system in dynamics while interacting with the external environment.

Concept of responsibility centers, which was perceived as a successful practice of foreign firms, has made significant influence on the views of domestic scientists and accountants on the organization of accounting and accounting system. The concept allowed to take into account original organizational and technological structures of particular enterprise through allocating appropriate centers to assign responsibility for executives of different levels of management. The concept allowed to monitor the implementation of approved revenue and cost budgets, as well as the distribution of authorities, functions, rights and responsibilities among the supervisors who are responsible for control and performance.

To organize and keep records of responsibility centers in a single accounting system of an enterprise, it is sufficient to structure synthetic and analytical accounting in a certain way. This model allows to implement the concept of deviation management, which involves the



assessment of each responsibility center as an element of the financial structure of the enterprise by comparing two main indicators: income and costs, and the quality of work of the head of the center. However, the division of activities into separate areas limits the ability to evaluate the achievement of tactical and strategic goals of the enterprise as a whole. Consequently, decision-making is limited by one unit and has rather partial than a holistic character, in other words system interaction is absent. Outside the area of control and motivation, there is only a direct performer who provokes inertia, formalism, and dishonest performance of his duties.

The process approach is based on the term of «business process» (BP), which is defined as a set of actions and categories. A set of interconnected actions jointly with a particular technology transforms input into output, which has value for the consumer. The categories include: process owner, entry, exit, resources, actions, actors, time, and end result.

The idea of transferring the cybernetic process approach to corporate management is attributed to the end of the 80-ies of the XX century. M. Hammer and J. Champa understood business process (BP) as a set of actions, based on one or more outputs, produces a value for the customer. M. Hammer and J. Champi as developers of reengineering indicates BP as a refusal of established procedures, a fresh perspective on the work of creating a product or service and presenting value to the customer<sup>14</sup>. J. Harrington interprets this term as a logical, consistent, interdependent set of measures that consumes the supplier's resources, creates value and delivers results to the consumer<sup>15</sup>. The definition of business process is closely related to reengineering.

The process approach, as a fundamental basic of modern management concepts, must be reflected in accounting frame of the management system. However, scientists in accounting have not received a clear assessment and practical use of this concept. In the modern accounting theory, a functional approach to the structure of the accounting system is dominated in the framework of business transactions by objects of accounting (fixed assets, inventories, production, means and payments, equity, etc.). Most accounting scholars

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<sup>14</sup> Hammer M and Champy J (1993) Re-engineering the Corporation: A Manifesto for Business Revolution. Harper Business, New York.

<sup>15</sup> Harrington, H.J., Esseling, E. K., Nimwegen, V., & van Nimwegen, H. (1997). Business process improvement workbook: documentation, analysis, design, and management of business process improvement.. McGraw-Hill, New York.

specify the process approach as «technical» alien, which hinders the development of modern accounting.

There is an alternative position to the use of process approach in accounting. Based on investigation of the process approach, T. Zyryanova and Y. Tarnowska<sup>16</sup> defines management accounting as an integrated information system for effective management of business processes, based on timely planning, correct financial and management accounting, economic analysis and control over all aspects of the enterprise.

The process approach and the use of business processes are better known as design tools of information systems for automation of accounting procedures. Thus, V. Osmjatchenko<sup>17</sup> proposed a methodological approach to the design of accounting information systems, which contrary to the traditional approach focused on functionally closed organizational charts, involves the rejection of autonomous logic in favor to mechanism of adaptation, orientation to progressive engineering business processes.

The results of the study of P. Kutsuk and V. Shevchuk<sup>18</sup> include the development of a theoretical model of regulation of business processes accounting, reporting processes (at three detail levels) and the model of business process «Management of resources and accounting function». The authors' model can be a basis for building a coherent structure of internal regulations that determine the order and requirements for the implementation of BP «Management of resources and accounting function of the company», that is, the main business process within which accounting and reporting are formed.

Functioning of accounting as a process at the enterprise information system is described in paper of B. Zasadnyi<sup>19</sup>. Accounting records and registers information on the facts of business activity in the input, reflects it in the accounting registers, performs the processing of information in certain forms of accounting and provides for information

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<sup>16</sup> Zyryanova T.V., Tarnovska Ju.S. (2012). Modeljuvannja procesnogho pidkhodu dlja cilej upravljinskogho obliku [The model of the process approach for the management of the oblas]. *Mizhnar. bang. region*, vol. 44 (242), pp. 15–28.

<sup>17</sup> Osmjatchenko V.O. (2010). Bukhghalterskyj oblik v umovakh zastosuvannja informacijnykh tekhnologij [Accounting in the conditions of application of information technologies]. Kyiv: KNEU. (in Ukrainian)

<sup>18</sup> Kutsik P.O., Shevchuk V.O. (2016). Procesnyj pidkhid do rozrobky korporatyvnykh rehlyamentiv obliku i zvitnosti [A Process Approach to Developing Corporate Accounting and Reporting Regulations]. *Economic Analysis*, vol. 23 (1), pp. 174–182.

<sup>19</sup> Zasadnyi B. (2016). Bukhghalterskyi oblik v informatsiinii systemi upravlinnia pidprijemstvom [Accounting in the information management system of the enterprise]. *Scientific Bulletin of Kherson State University. Ser.: Economic Sciences*, vol. 17 (1), pp. 146–149.

as a finished product in the outputs. At the same time, accounting is a complex information system that integrates all the features of the system.

The results of a significant study, including the purpose of accounting as an imperative basis, allowed the authors J. Dankov and M. Yatsko<sup>20</sup> to assert the dominant role of the process approach to understand accounting. They believe that accounting is a process, a transition from one stage to another, aimed at passing on information through financial reporting. However, we can not buy into the idea of such explanation of accounting, since it does not show its boundaries and answer the questions where the science of accounting begins and ends, and where there are limits to other economic disciplines. The authors' analysis of the relationship between the process approach and the systematic approach proves the relevance and perspective of this area of research.

Scheer AW. (1998) firstly proposed architecture of Integrated Information Systems (ARIS) in the form of information pyramid and described relation between its levels<sup>21</sup>.

Lim F. P. C. gives an example of General Model for Accounting Information System. The elements include end users, data sources, data collection, data processing, database management, information generation and feedback<sup>22</sup>. The author also presents the general flow of the accounting process. The four basic steps involved are analyze transactions, record the effects of transaction, summarize the effects of transactions and prepare records. There is one important conclusion for our investigation, says that computers have improved the accounting processes but computers can't replace the role of man in the accounting systems.

Taiwo J.N. believes that accounting systems include the computer hardware and software fundamentals in recording accounting information<sup>23</sup>.

The Financial-Accounting Information System integrates the assembly of information resources of economic-financial nature created

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<sup>20</sup> Dankiv J., Jacko M. (2015) Bukhghalterskyj oblik ta finansova zvitnistj v Ukraini: procesnyj pidkhid [Accounting and Financial Reporting in Ukraine: A Process Approach]. *Accounting and Auditing*, vol. 12, pp. 10–17.

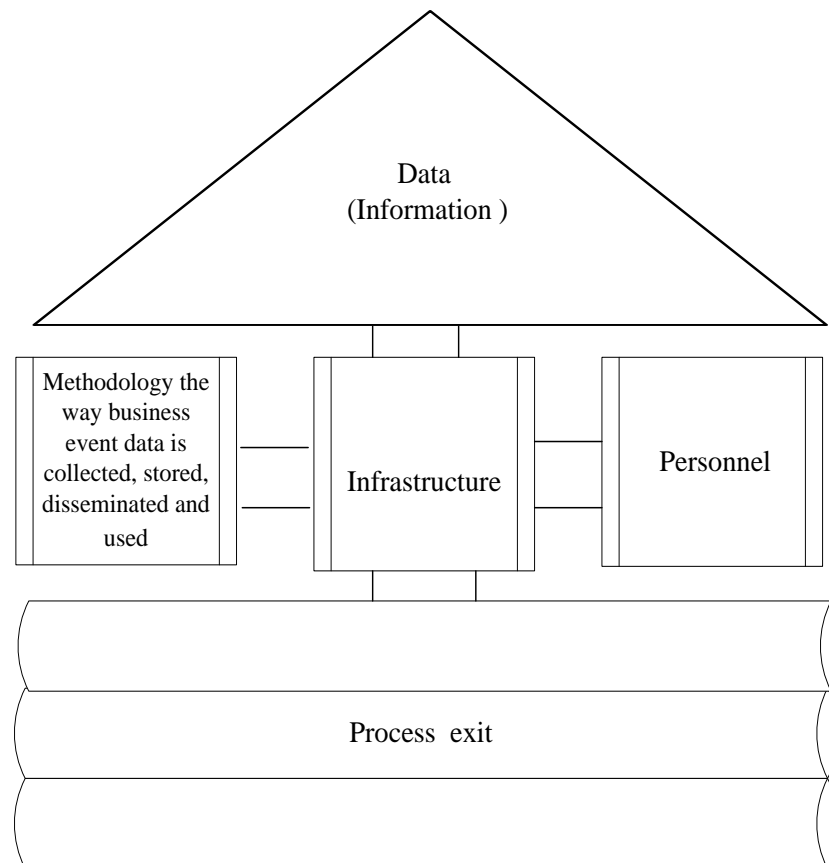
<sup>21</sup> Scheer, A. W. (1994). Architecture of integrated information systems (ARIS). In *Business Process Engineering* (pp. 4-16). Springer, Berlin, Heidelberg. DOI [https://doi.org/10.1007/978-3-662-03615-0\\_1](https://doi.org/10.1007/978-3-662-03615-0_1)

<sup>22</sup> Lim, F. P. C. (2013). Impact of information technology on accounting systems. *Asia-Pacific Journal of Multimedia Services Convergent with Art, Humanities and Socialgy*, 3(2), 93-106.

<sup>23</sup> Taiwo, J. N. (2016). Effect of ICT on accounting information system and organisational performance: The application of Information and Communication Technology on Accounting Information System. *European Journal of Business and Social Sciences*, 5(2), 1-15.

on the level of all the organization structures and which are processed for the substantiation of the management decisions and fulfillment of scopes<sup>24</sup>.

The process-based accounting information system combines systematic and functional approaches, creating high-level integrity. The model supports the complexity of functions and organizing the interaction of all system elements (Figure 1).



**Figure 1. Model of accounting information system at the enterprise**

*1. Data (Information )*

The first component is information about business operations of the enterprise connected with inventories, production and sales of goods (services), as well, with activity of Production, Engineering, Purchasing, Sales/Marketing and Personnel Placement departments.

The second component is information of external business environment.

<sup>24</sup> Niculae, M. (2017). The role of the financial-accounting information system in the matrix of the entity functions. *Academic Journal of Economic Studies*, 3(3), 19-23.

2. *Methodology the way business event data is collected, stored, disseminated and used*

Rules and industry-wide regulations, Regulations (standards) of accounting, instructions, procedures, methods and techniques.

3. *Infrastructure*

Technical means, hardware, information and communication technologies, software package.

4. *Personnel*

Employees of accounting department are the users of the system. The quality of employees performance is determined by the professional competencies, traditions and culture of the enterprise.

5. *Process exit*

Data on operations, documents, registers, journals, books, reports, data for management decisions, internal control (audit), information security.

An interconnected accounting system reflects an integrated set of tasks and functions, operations and actions, which are necessary for informational support of management of enterprise. Particular attention should be paid to the development of business process regulations for each individual operation. A regulation is a document that describes the order for performing certain procedures. The regulation provides a sequence of steps that a participant or group of participants must use to carry out business processes, usually with an indication of the limited time and specific dates. For the information system, appropriate infrastructure is should be selected.

The description of the business process, that realizes the accounting function, significantly differs from other similar processes, primarily because of the specific characteristics of accounting:

- accounting method and its elements;
- standardized document flow of parallel movement of material resources and financial flows;
- a high degree of standardization of methodology, especially as a result of its reforming and harmonization with the provisions of IFRS (IAS);
- path dependency exacerbated by the requirement to reflect the facts of economic activity after their performing;
- the complexity of changing of the methodology and organization of the traditional accounting process (primary, current, final accounting).

When accounting overlaps the main business processes, it remains the main aspects of accounting:

- each major business process is served by one or more business accounting processes;
- document flow (paper and / or electronic);
- each business transaction reflects two accounting events, etc.

The process approach transforms the focus from software to the user. In other words, the accountant does not acquire and adapts the program to the activities of a particular enterprise, but rather determines the criteria and parameters of the accounting system which information technology must implement. Therefore, the enterprise's accounting system in digital aspect is a combination of the basic elements: actors (owner, participants, performer), interactive business processes, communications, information systems and technologies.

The construction and operating of the accounting system in the light of process approach are based on the concept of the quality of information systems. In other words, all processes (actions, operations) between system elements require accurate and reliable algorithms of execution, simple visual ordering of objects, practical metrics (descriptions) and regulations. Modeling of the accounting system based on the process approach does not change the methodology and fundamental principles of accounting, however, it technically formalizes the context of concepts and the identification of objects and procedures.

Special software, represented by a separate program or set of integrated software, or customized software, or combinations of them, allows to expand use of the process approach in practice. In any case, IT products are just tools for implementing the concept of business process management in a digital environment.

## **CONCLUSIONS**

Thus, the evolution of accounting in Ukraine should be closely linked to changes of the economic situation in the country and meet current scientific trends, focus not only on improving the traditional methods of recording the results of economic activity for further generalization in reports, but also on the tools of relation of accounting functions with management functions based on different scientific approaches.

The effectiveness of the accounting system depends on many factors, but under certain conditions, assume a critical importance, which leads to an update of existing approaches or the emergence of new ones.

The evolution of already known approaches confirms the statement of the dialectic about the spiral movement of development. In other words, we can consider the transformation of approaches as a transition to certain levels created from the previous under the influence of society changes. So, as a result we get a synthesis of approaches for studying the accounting system of enterprise. Thus, the philosophy of the digital economy provides the critical importance to the human factor (human capital) and the development of communication (social capital).

There are two opposite opinions of scientists on the assessment of the impact of the digital economy on the methodology (paradigm) of accounting. The first argues that the transfer of accounting systems in the virtual space should lead to radical changes. The second one, justifies the invariance of the basic foundations of accounting, whereas information and communication technologies are considered only as elements of the implementation of the accounting functions.

The scientific community has a dominant opinion about the need to transform enterprise accounting in line with the electronic environment, but scientists estimates the impact of computer technologies, information systems and communications technologies on the accounting system in different way.

Special software, presented by a separate program or set of integrated software, or customized software, or combinations of them, allows to expand use of the process approach in practice. In any case, IT products are just tools for implementing the concept of business process management in a digital environment.

The architecture of the accounting system is a tool to achieve its goal, namely to provide users with complete, reliable and in time information. First of all, the construction of the accounting system corresponds with national accounting system. At the same time, theories, approaches, principles and methods evolve, leading to abstraction from a particular enterprise and the formation of universal practices that become successful for most businesses. Process approach is one of practices to build an accounting system.

Business management requires the accounting system based on the latest scientific approaches, innovative IT solutions, successful international and domestic practices. The system of accounting of the enterprise within the process approach, is a business process that implements the function of management. Accounting system provides accounting at the enterprise within the methodology the way business

event data is collected, stored, disseminated and used, by means of infrastructure and personnel.

### **SUMMARY**

Different approaches of the identification of the enterprise accounting system are presented in the article. The first part is devoted to analyzing the stages of accounting evolution in Ukraine in order to highlight the national features that have influenced the formation and development of modern accounting. The views of Ukrainian scientists were formed by the influence of crucial changes in the economic system of the country, the rapid development of information technologies and the latest theories and concepts of foreign authors. The second part explores the functional, systemic and process approaches to the formation of the accounting system. The presented accounting information system model demonstrates the convergence of these approaches within the digital economy.

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