

This paper considers the organizational and legal support of the processes of digitalization of innovation in the financial and tax sectors. The main prerequisites were identified, and the role of financial and tax innovations in the development of the economy at the macro level was defined. Emphasis is on digital technologies as the main driving force of innovation in the financial and tax sector. The relationship between the concepts of “financial and tax innovations” and “financial engineering” has been established. The main directions of digitalization of the financial and tax sectors are identified. The digital technologies that have the greatest impact on financial and tax innovation are identified, namely: blockchain, Big Data, artificial intelligence, cloud technologies, the Internet of Things. The directions of legal regulation were substantiated and further steps to develop legal support for the digitalization of the financial sector were determined. To this end, the components of legal regulation, institutional regulation, and scientific and methodological regulation of digitalization of the financial sector are detailed. In contrast to numerous studies in the field of legal support and regulation of digitalization of the financial and tax sectors, it has been hypothesized and proved that the greatest effect is achieved with the harmonious interaction of institutional components. The system of management of financial and tax innovations in the context of digitalization has been improved. To this end, the stages of the transformation process of the financial and tax innovation management system in the context of digitalization were detailed and an algorithm for digitalization of the financial sector has been developed. The scope of practical application of the research results is the development of the financial and tax sector through the introduction of digital tools

Keywords: financial and tax innovations, financial and tax management, legal regulation, digital technologies

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IMPROVING THE GOVERNANCE AND LEGAL FRAMEWORK FOR IMPLEMENTING FINANCIAL AND FISCAL INNOVATION IN A DIGITALIZED ENVIRONMENT

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1. Introduction

Digital changes that took place at the beginning of the XXI century created a prerequisite for revolutionary changes in the financial sector. This has led to a significant transformation of the financial market. First, digital technologies have radically changed the tools by which payment, accumulation, credit, and investment services are provided. Third, new types of money have appeared – digital. Third, the traditional model of interaction between businesses

and banks was replaced by an improved ecosystem, which included all participants in financial relations.

Digitalization has brought to the fore the use of digital financial products and services, the demand for which is constantly increasing. For the purpose of innovative development of financial technologies at the national level, its strategic directions are being developed and approved. In parallel with this, there is a change in the needs of the population in the direction of increasing demand for the use of the latest financial technologies. This is the key to and ensures some

success on the way to the implementation of the strategy for the development of financial and tax innovations in the context of digitalization. It is worth noting that among the main innovative achievements in the financial sector in recent years is the widespread use of digital tools. For example, the spread of mobile devices provided the ability to remotely manage accounts in real time. Businesses and the population felt significant relief after the introduction of the electronic declaration system. Innovative trends in the financial sector are gaining momentum due to the development of financial and technological startups. At the present stage, there is fierce competition among newly created companies engaged in the development and proposal of financial innovative technologies, as well as traditional financial institutions. In parallel with this, there is a harmonious financial integration through the formation of ecosystems. This creates new opportunities for all participants in the financial market, significantly increasing the socio-economic effect as a result of such interaction. Under such conditions, both business representatives and the population are involved in financial ecosystems. The regulatory function is assigned to state authorities. As a result of the digitalization of financial and tax instruments, the stability of the financial system increases, its processes are optimized, and conditions are created for dynamic development and response to unpredictable events. The latter condition takes place only if financial and tax innovations are effectively regulated in the context of digitalization. Therefore, it is important to improve the management system and legal support for the implementation of the process under study. The results of such studies are needed by practice to harmonize the organizational and legal relations of all participants in the financial sector. Balancing the interests of all stakeholders will increase efficiency not only in the field of finance and taxes but also ensure the economic development of the country as a whole.

2. Literature review and problem statement

The problems of the development of financial and tax innovations in the context of digitalization are tackled by many researchers.

Work [1] is one of the empirical studies of the link between digital transformation and financial development. The authors evaluated digitalization in terms of digital connectivity, internet usage, e-business, e-commerce, and e-government. In addition, nine indicators were used to determine the depth, access, and effectiveness of financial markets. Using various econometric methods of European countries, the positive impact of digitalization on the development of both financial markets and institutions has been demonstrated. Among all the factors, digitalization in business and the public sector and the digital skills of individuals play a crucial role in financial development. With the proliferation of digital transformation, digitalization is likely to improve the depth and efficiency of financial development. The study emphasizes the importance of digital transformation in business and the public sector to increase the depth and efficiency of financial markets. In other words, digitalization in the public sectors is an important factor in ensuring access to financial markets. However, in the study, the authors focus on generalized conclusions and do not give specific recommendations for solving problems in the financial sector. This is due to the wide coverage of indicators and criteria

of the financial market, which makes it impossible to solve this deficiency. More detailed conclusions are contained in article [2]. The authors focus on identifying and analyzing the main problems arising in the field of control over the financial sector as a result of the digitalization of financial markets and the use of digital tools. The study points to the need to use innovative SupTech surveillance and regulatory technologies. This is exacerbated by the digitalization of surveillance analytics, the use of big data and artificial intelligence. In addition, as a result of digitalization, there is an additional change in the relationship between supervisory authorities and controlled entities in the financial sector. In parallel with this, it is worth noting a significant drawback, in particular, the authors do not consider the concept of FinTech, which is used to designate innovations in the financial sector. This problem is solved in [3], which considers the main directions, challenges, threats to the development of the latest financial technologies – FinTech. The authors characterize the trends and technological foundations of digitalization of financial intermediation in the fields of payment systems, lending and deposits, insurance, investment management, financial trading. In parallel with this, the likely consequences of FinTech's influence on the activities of traditional financial intermediaries are determined. The factors that contribute to the spread of FinTech are given. It is noted that the use of financial and tax innovations is influenced by changes that are the result of financial crises. At the same time, potential risks to financial stability that arise during the implementation of FinTech are determined. The study emphasizes the need to ensure a reliable level of information security of financial intermediation, taking into consideration digitalization based on new digital technologies and information and communication systems. At the same time, there are no concrete steps to implement such a scenario. Continuing this study, the authors in article [4] identify the main directions, challenges, and threats to the development of FinTech, RegTech, solving this problem. The researchers analyze modern ecosystems and global trends in FinTech, their impact on the transformational development of principles, models, and the emergence of new threats to traditional financial intermediation. In addition, attention is paid to investigating the field of activity of traditional financial intermediaries that require the use of innovations, the possible consequences of the influence of modern regulatory standards on the banking sector. In [4], it is proved that the use of RegTech is one of the prerequisites for improving the risk management systems of financial intermediaries. When using innovative financial innovations to carry out the regulatory function, the quality and efficiency of compliance systems of financial institutions is significantly improved. This creates the basis for increasing the protection of the interests of depositors, creditors, and investors. There are also new opportunities for cooperation between traditional financial intermediaries and RegTech companies. At the same time, the study does not consider the digital tools for the implementation of these steps.

An option to overcome difficulties is work [5], the authors of which also note that as a result of digital transformation, FinTech initiatives are emerging – one of the most important innovations in the financial sector. These initiatives are actively developing due to the improvement of digital technologies. The study details the areas of FinTech's distribution – financing, payment, including e-wallets, electronic aggregators, e-commerce, and e-insurance, as well as crypto-

currencies such as Bitcoin. Study [6] notes that the spread of the use of mobile devices and blockchain in the financial sector contributes to its efficiency. This creates new opportunities for business development. In contrast, other authors [7] believe that the potential development of innovation in the financial technology sector depends on the cryptocurrency blockchain or distributed ledger technology (DLT). At the same time, it is noted that the requirements and guarantees of blockchains for cryptocurrencies do not meet the requirements of FinTech – from transaction throughput to security and privacy primitives.

It is worth noting that the forecasting of certain scenarios for the implementation of financial innovations is impossible without studying the successful experience of technologically developed countries. This suggests that it is expedient to conduct a study on the peculiarities of financial innovations in individual countries. In particular, innovations in lending in China are being investigated, focusing on existing digital platforms [8]. The experience of managing daily financial transactions in India through the use of mobile applications is studied [9]. Study [10] considers an example of innovative financial technologies in Japan. The authors of [11] assess the dynamics of development and financial innovation in Indonesia. In addition, attention is paid to the study of information data security and increasing consumer confidence in financial innovations in the context of digitalization in Germany [12].

The proliferation of digital financial instruments increases attention to research on the regulation of tax innovations in the context of digitalization. Article [13] discusses the peculiarities of the implementation of the principles of the welfare state in the tax law of different countries, in particular the European Union, in the context of the development of the digital economy. The authors conclude that one of the important socially innovative legal means of implementing the state tax and legal policy in the digital economy is tax and legal incentives. As a result, it is expedient to further develop the stimulating function of taxation, which contributes to the further realization of socio-economic rights of citizens and innovative activity in the context of digitalization. A narrower position on the consideration of tax innovations can be traced in work [14], where the authors study the international experience of regulating value added tax in the era of digitalization. The article highlights the main problems associated with the use of this tax as a result of the development of modern information technologies and e-commerce. At the same time, it is noted that its effectiveness is reduced as a key tool for accumulating budget revenues.

Summarizing the information given in [1–14], we can conclude that problematic issues regarding the peculiarities of financial and tax innovations in the context of digitalization have an essential research base. At the same time, the issues of regulation of these instruments are not sufficiently covered, in particular, the peculiarities of management and legal support for financial and tax innovations require more detailed attention.

3. The aim and objectives of the study

The aim of this study is to improve the management system and legal support for the implementation of financial and tax innovations in the context of digitalization. Thanks

to this, it will be possible to create preconditions for the development of the financial sector, which is the basis for further development of the economy.

To accomplish the aim, the following tasks have been set:

- to analyze the essence and determine the role of financial and tax innovations in the development of the economy at the macro level;
- to explore the directions of digitalization of finances and taxes;
- to study the legal regulation of digitalization of the financial sector and determine further directions for the development of legal support for the digitalization of the financial sector;
- to study the system of management of financial and tax innovations in the context of digitalization and to develop an algorithm for the digitalization of the financial sector.

4. The study materials and methods

The object of this study is the process of managing financial and tax innovations. We hypothesized the direct impact of digitalization on the introduction of innovations in the financial and tax sectors. It has been suggested that with the help of digital technologies, regulation and legal support for financial and tax innovations is simplified.

The theoretical basis of the study is provided by the basics of the theory of financial management, taxes, innovation management, as well as financial law. In addition, scientific works were used [3–7], which report research in the field of financial technology development (FinTech), digital tools in the economy, in particular, in the financial sector. The legal basis of the study was formed by the current legislation on legal support for the implementation of financial and tax innovations in the context of digitalization.

In the process of research, the method of theoretical generalization was used in the analysis of the essence of financial and tax innovations. The structural-logical method was used in the systematization of the directions of digitalization of finances and taxes, as well as the directions of development of legal support for the digitalization of the financial sector. The system approach and method of algorithmization was used in building the process of transformation of the financial and tax innovation management system under the conditions of digitalization, as well as the algorithm for digitalization of the financial sector. The method of logical abstraction was used when drawing conclusions and discussing the results of the study.

5. Results of research on administrative and legal support for the digital transformation of financial and tax innovations

5.1. Results of the analysis of the essence of financial and tax innovations

The rapid development of budgetary and financial relations has led to the emergence of new financial and tax tools, which, in turn, are one of the prerequisites for stabilizing the economy at the macro level.

It seems expedient to consider the relationship of financial tax innovations, defining their common features, as well as unifying components, which gives grounds for their

joint consideration. Taxes are one of the main components of finance. In addition, taxes and finance perform the same functions – distribution and control (regulatory). At the same time, the functional tasks of taxes are more limited in contrast to finance [15]. It is worth noting that the close relationship and interaction of finance and taxes can be traced not only at the macro but also at the macro level. Financial and tax innovations are associated with the introduction of new financial and tax technologies [16]. In this role, new conceptual foundations of the financial and tax sectors can act as a theoretical component, as well as new financial and tax tools or processes as a practical component. Increased international competition and the development of the global market creates preconditions for the use of new financial and tax tools. Researchers and experts in the field of finance call this process financial engineering [17, 18]. Comparing the development and implementation of financial and tax innovations in Ukraine, it becomes obvious that the country lags behind the developed countries of the world [19]. This is seen as not only a negative but also a positive aspect, which implies the existence of additional motives and incentives for the innovative development of the financial sector. It is worth noting that in the post-industrial economy, the process of developing innovative financial and tax tools is based on the use of digital technologies [20]. In other words, thanks to digitalization, there has been a qualitative leap in the development of the financial sector.

5. 2. Studying the areas of digitalization of finance and taxes

Digitalization defines innovative transformation processes that take place in financial markets. It is a kind of driver for improving the efficiency of its development. Digital innovations in the field of finance and taxes act as a basic prerequisite for the emergence of alternative business models and new entities. The processes of digitalization of finance and taxes are aimed at achieving strategic goals for the development of not only the financial market, but also the economy as a whole. First, through the use of a digital format, greater availability of financial and tax services of high quality is ensured. Second, the introduction of financial and tax innovations reduces the risks and losses of the financial market. Third, financial and tax innovations increase competition [21]. In other words, the processes of digitalization of the financial and tax sectors of the economy predetermine the transformation of development targets. As a result, there is a rapid transition from a competitive to a reasonable model of economic development [22]. At the same time, the main condition for the transformational transformation of the economy is the introduction of financial and tax innovations through digitalization. This gives reason to argue that the primary areas are digitalization, from which financial and tax innovations based on the introduction of digital technologies are derived.

Fig. 1 systematizes the directions of development of digitalization of finance and taxes.

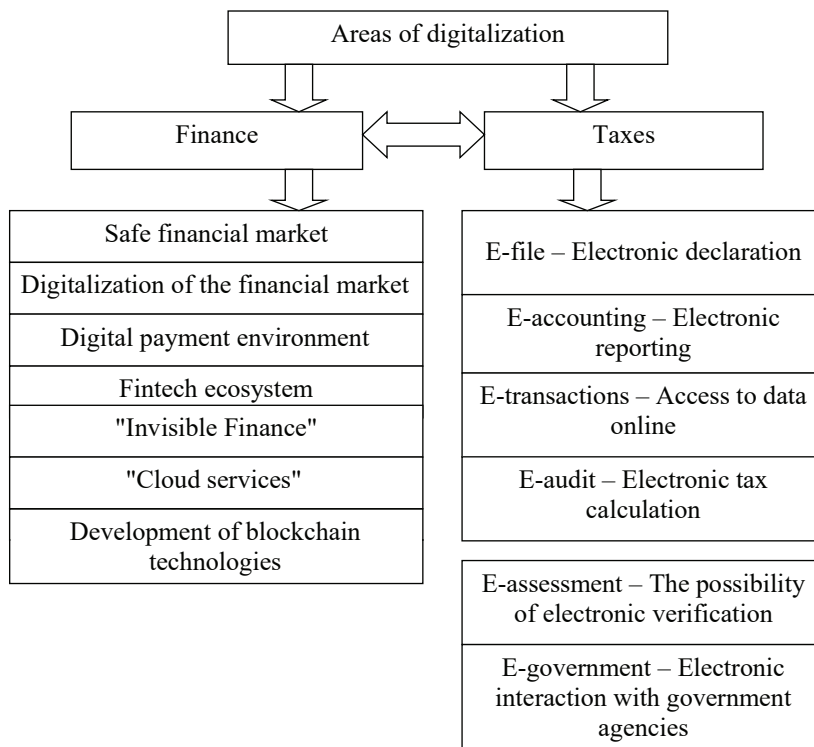


Fig. 1. Areas of digitalization of finance and taxes
 Note: compiled from [21–28]

Blockchain, blockchain-based smart contracts, Big Data, artificial intelligence, machine learning, cloud technologies, the Internet of Things are used as the main digital tools for the development of financial and tax innovations [29, 30].

5. 3. Legal regulation of digitalization of the financial sector

In the context of digital transformation of all sectors of the economy, a legislative framework is being formed for further development. The financial sector is no exception. It is worth noting that separate regulations have already been adopted to regulate digital processes, in particular digital transformations and digitalization of the public finance management system [31, 32].

In this regard, it seems expedient to determine the directions of development of legal support for the digitalization of the financial sector (Fig. 2).

First of all, the adopted “Strategy for the digital development of digital transformations and digitalization of the public finance management system” in accordance with the new political, legal, and socio-economic realities needs corrective actions.

No less relevant is the adoption of a separate law on the regulation of digitalization of the financial sector of the economy. An equally important step is the issue of regulating information security. In particular, the transition to an electronic document management system requires legal protection of relations arising in connection with the processing, storage, access, and transfer of information related to finances and taxes. In parallel with this, it is advisable to create legal conditions for free circulation and ensure its information transparency, which corresponds to the postulates of the digital economy.

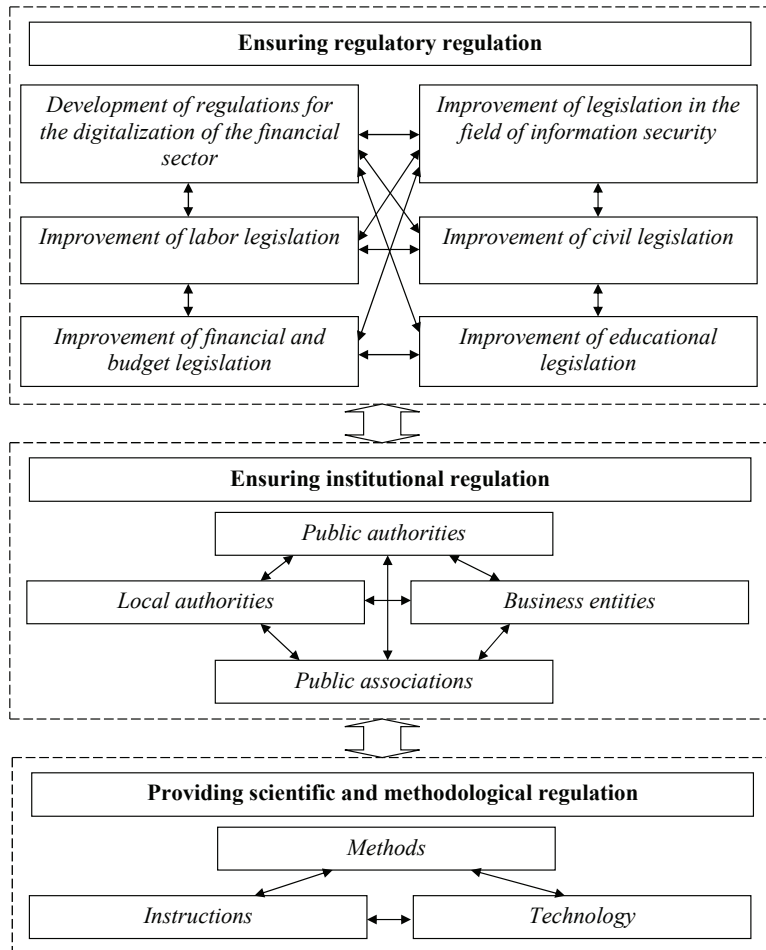


Fig. 2. Directions of development of legal support for digitalization of the financial sector

Note: compiled from [33–37]

Within the framework of civil law, digitalization necessitates the legislative provision of special regimes of contractual obligations arising from e-commerce, as well as the use of artificial intelligence. It is worth noting that the expansion of the possibilities of using the artificial intelligence system requires the need to identify the latter as a special subject of legal relations, along with ensuring the protection of property rights.

With regard to labor legislation, it is necessary to adopt norms related to the transformation of labor relations into a digital format. This is of particular relevance in the context of the coronavirus pandemic, as well as the introduction of martial law. At the same time, the procedure for concluding labor agreements through the use of digital signatures and electronic forms should be simplified as much as possible.

To ensure the further development of digital technologies, it is extremely necessary to legislatively regulate financial and tax relations between the subjects of the digital economy. At the same time, it would be expedient to introduce special preferential tax regimes for companies whose activities are related to the development of new financial technologies. In addition, regulatory legal acts that will regulate new forms of financial and tax control related to the use of digital technologies require the adoption.

The success of digitalization in any field directly depends on the educational qualification characteristics of specialists ensuring its implementation. In this regard, it is important to develop new educational standards adapted to the conditions of development of the digital economy.

The harmonious interrelation of the above-mentioned steps of regulatory regulation of the digitalization of the financial sector cannot be ensured without effective institutional support.

5. 4. Results of investigating the financial and tax innovation management system in the context of digitalization

The development of the digital economy creates preconditions for the formation of fundamentally new means of interaction in the field of finance and taxes. The emergence of new financial and tax tools requires the adaptation of the financial and tax innovation management system to the conditions of digitalization. Schematically, the process of transformation of the financial and tax innovation management system in the context of digitalization is shown in Fig. 3.

To ensure the most effective conditions for the transformation of the financial and tax innovation management system, it is recommended to use the algorithm for digitalization of the financial sector. This algorithm is based on the use of structural filters of factors that can have a negative impact on the process under study. Removing obstacles to the digital transformation of finance will ensure a harmonious transformation of the financial and tax innovation management system at all stages of digitalization (Fig. 4).

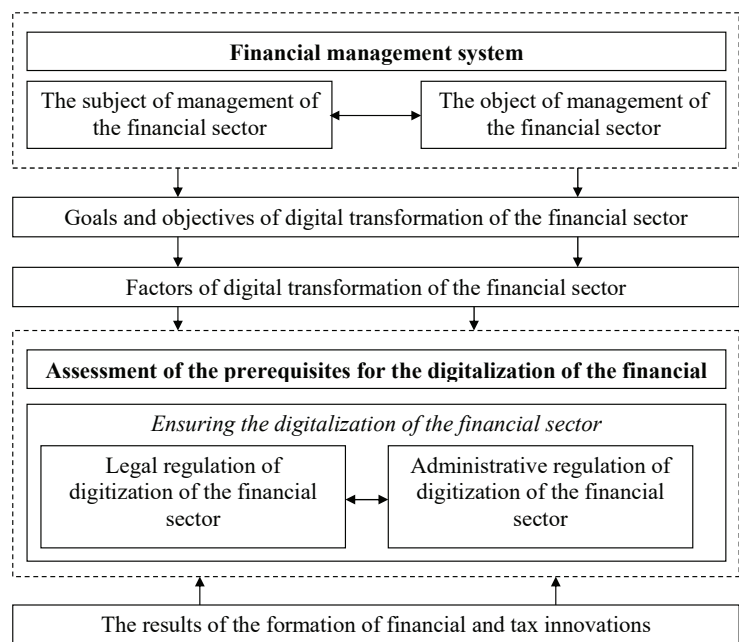


Fig. 3. The process of transformation of the financial and tax innovation management system in the context of digitalization

Note: compiled from [38–42]

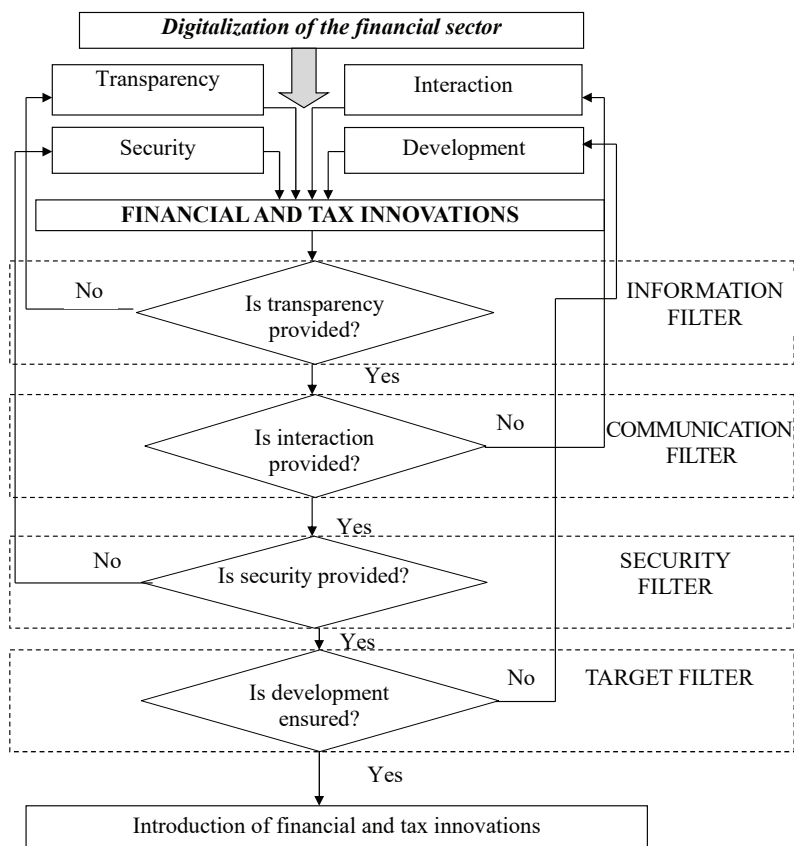


Fig. 4. Algorithm for digitalization of the financial sector
 Note: compiled from [43–46]

Fig. 4 demonstrates that the procedure for introducing financial and tax innovations as a result of the digitalization of the financial sector involves the sequential passage of four structural filters. In particular, information, communication, development, without a pecking, and filter. The information filter assumes the openness, reliability, and transparency of financial information for users. The communication filter ensures effective interaction of subjects of the financial sphere. The security filter is responsible for the storage and reliability of electronic documentation. The target filter provides strategic directions of activity of financial entities. Thus, only if all these filters are passed, it is considered expedient to introduce financial and tax innovations. An example of the application of the presented algorithm for the digitalization of the financial sector at the micro level is an improved audit methodology covering all aspects of payroll calculation. As a result, the correctness, timeliness, and legality of the reflection in the salary calculations are ensured, which allows us to quickly detect violations and conduct a quality audit [47]. At the macro level, the algorithm for digitalization of the financial sector can be used, for example, in forecasting budget indicators that are contained in the formation of state tax policy [48]. Transformed under the influence of digitalization, the financial and tax management system will create prerequisites for financial and tax compliance, which can be considered as the most effective innovations in these areas [49]. The introduction of a system of financial and tax compliance provides new opportunities for interaction between entities, bringing them to the level of trust and partnership. As a result, there is a minimization of the risks of non-compliance with the requirements of the legislation in the field of finance and taxes.

6. Discussion of results of the study of administrative and legal support for the digital transformation of financial and tax innovations

Analyzing the management system and legal support for the implementation of financial and tax innovations under the conditions of digitalization, it is advisable to note that under modern conditions they are being actively implemented. This, in turn, leads to the integration and emergence of their new species. Companies offering innovative financial technologies are entering into competition with banks and other participants in the financial market in a certain range of activities. Of course, in 2020 alone, digital finance provided assistance to households and companies in overcoming the problems created by the COVID-19 pandemic, provided public administrations with new methods of reaching those who need financial support [50].

In the process of research, the essence of the concept of financial and tax innovations, commonly known as financial engineering, was determined. This term has been used in the theory of finance since the end of the twentieth century and implies the growth in the financial sector of the latest or modified financial technologies [51]. At the present stage, these innovations are a consequence of the introduction and active use of digital financial and tax tools.

Digital transformation of the financial sector opens up new opportunities to achieve strategic guidelines for the activities of all, without exception, entities, especially businesses and the population. Thus, the presented directions of development of digitalization of finances and taxes (Fig. 1) are a consequence of this process. Unlike [52–54], they aim to ensure information transparency in the financial sector of the economy.

Further transformational changes in the direction of digitalization of financial and tax tools contribute to the introduction of innovations in the financial sector and require administrative and legal regulation. Thus, the directions of development of legal support for the digitalization of the financial sector presented in Fig. 2 will contribute to the formation of an effective system for managing financial and tax innovations in the context of digitalization (Fig. 3). Achieving the maximum effect becomes possible due to the observance of a certain algorithm for the digitalization of the financial sector (Fig. 4). As components of the algorithm, it is proposed to use four types of filters – information, communication, security, and target [55–57].

The limitation of this approach is the absence of equally important filters, for example, resource filters, as well as the procedure for passing each of them. The main drawback is the impossibility of clearly defining the indicators and criteria by which financial and tax innovations will be filtered and decisions will be made on their implementation.

Thus, further research is expedient to conduct in the direction of theoretical deepening and development of administrative and legal tools that ensure the process of implementing financial and tax innovations in the context of

digitalization. In particular, it is expedient to advance our research in the following areas:

- further systematization and identification of new components of legal support for the digitalization of the financial sector. At the same time, it is important to harmoniously combine legal support with the management system of financial and tax innovations in the context of digitalization;
- determining criterion indicators for the process of filtering financial and tax innovations with clarification of the steps that need to be taken at each stage. This will greatly simplify the management of these processes and will make it possible to make the right decision on the further implementation of financial and tax innovations.

7. Conclusions

1. Based on the analysis of the essence of financial and tax innovations, their role in the development of the economy at the macro level is determined. It is proved that the main prerequisite for the use of new financial and tax tools is the strengthening of international competition and the development of the global market, namely in the IT industry and FinTech. It has been established that the concept of “financial engineering” is used to determine the studied categories. It is determined that the main driving force for the development and implementation of innovative financial and tax tools in the developed countries of the world are digital technologies.

2. The directions of development of digitalization of finances and taxes are systematized. It is proved that the processes of digitalization of finance and taxes affect the strategic development of both the financial market and the economy as a whole. It is determined that under modern conditions a variety of digital tools can be used for the development of financial and tax innovations. Therefore, the most common digital technologies include blockchain, Big Data, artificial intelligence, cloud technologies, the Internet of Things, which are powerful drivers for the implementation of financial and tax innovations. It is

substantiated that the effect of the implementation of financial and tax innovations in the context of digitalization is to reduce the level of the shadow sector of the economy.

3. It is determined that at the present stage there is a formation of legal support for individual processes of digital transformation in the financial sector. In particular, the Strategy for digitalization of the public finance management system has been developed and approved. It is proved that the existing legal framework for the implementation of financial and tax innovations in the context of digitalization needs further improvement. To this end, further directions for the development of legal support for the digitalization of the financial sector are substantiated. It is singled out that the latter are the processes of ensuring regulatory regulation, institutional regulation, and scientific and methodological regulation. It was established that in order to increase the effectiveness of legal support for digital transformation in the financial sector, it is necessary to achieve a harmonious relationship between certain areas.

4. The process of transformation of the financial and tax innovation management system in the context of digitalization has been described. In order to achieve the maximum effect, an algorithm for digitalization of the financial sector has been developed, which provides for the sequential passage of filtering stages for such components as transparency, interaction, security, development. Each of these elements is characterized. It was established that this algorithm determines the expediency of implementing financial and tax innovations under the conditions of digitalization, which makes it possible to increase the efficiency of the management system of the researched process.

Conflict of interests

The authors declare that they have no conflict of interest in relation to this research, whether financial, personal, authorship or otherwise, that could affect the research and its results presented in this paper.

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