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DEVISING WAYS TO IMPROVE THE FINANCIAL AND TAX MECHANISMS FOR OVERCOMING THE SOCIO-ECONOMIC CRISIS CAUSED BY MARTIAL LAW

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The object of this study is the process of improving financial and tax mechanisms to overcome the socio-economic crisis caused by martial law in Ukraine in the context of digital transformation. During the study, the problem of non-compliance of the existing financial and tax mechanisms with the requirements of digital transformation and the peculiarities of the functioning of the financial sphere under martial law was solved. The key elements of financial and tax mechanisms that should be primarily revised in order to overcome the socio-economic crisis have been clarified. The shortcomings of the functioning of financial and tax mechanisms for overcoming the socio-economic crisis are highlighted. The results of a survey of experts on the proposed factors influencing the effectiveness of such mechanisms were analyzed using the Kendall's concordance coefficient. The most significant factors that formed the basis for the developed directions for improving the financial and tax mechanisms for overcoming the socio-economic crisis have been established. The peculiarities and distinctive features of the results obtained are unanimous consideration of the requirements of digital transformation and the peculiarities of the functioning of the financial sphere under martial law. The financial and tax mechanisms improved on the basis of digital technology are based on the declared principles of G20 digital financial inclusion. The most significant factors of influence were the infrastructure of financial and tax mechanisms; legal and regulatory framework for digitalization; combating digital fraud; adaptation of foreign experience in the use of digital technologies to the national environment. The results can be used in the practical activities of the financial authorities of Ukraine in order to overcome the socio-economic crisis under martial law

Keywords: financial and tax mechanism, socio-economic crisis, digital transformation, financial and legal regulation, social policy

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1. Introduction

Financial and legal regulation is based on an understanding of the permissible degree of freedom of financial transactions [1]. The development of financial and legal regulation of financial and tax mechanisms is accompanied by rapid processes of digital transformation. Thus, the goal of the Strategy for the Development of the Financial Sector

of Ukraine until 2025 [2] is to implement effective measures to reform and develop the financial sector. In accordance with foreign developments, such measures provide for development and implementation of digital technologies in the process of formation and implementation of financial and tax mechanisms. The chosen state course towards European integration and the signing of the relevant agreement with the EU led to the adoption by Ukraine of a large number of

regulatory legal acts in accordance with European directives and regulations [3–5]. In addition, the global coronavirus pandemic has put forward requirements for continuous self-isolation of individuals and legal entities. In these circumstances, digitalization has become the only possible way not only to communicate but also to solve financial and tax issues. This necessitates the introduction of appropriate changes in national legislation in the labor, social, as well as tax and financial spheres [6, 7].

Russia's military aggression has further actualized the issue of digital transformation of existing financial and tax mechanisms. Such problems caused by martial law have come to the fore: forced business closures, job cuts, reduction of budget and Pension Fund revenues, delay in payment of wages and pensions, etc.

Therefore, taking into account the above-mentioned, the current financial and tax mechanisms should be immediately revised, taking into account not only the ability to overcome the socio-economic crisis caused by martial law but also in terms of the compliance of such mechanisms with the possibilities of digitalization.

Taking into account the above, the area of appropriate research can be considered relevant.

2. Literature review and problem statement

A large number of scientific works consider the problems of improving financial and tax mechanisms, including in the context of digital transformation, the analysis of which showed the existence of significant scientific work on the theoretical and methodological development of the outlined issue.

Paper [8] explores the impact of financial inclusion on various sectors and spheres of public life. The results substantiate the presence of the following main measurements of the effectiveness of the implementation of digitalization processes in the field of financial services: coverage, use, quality. This makes it possible to develop institutional aspects of financial inclusion in the context of digitalization of economic relations. On the other hand, outside work [8] are the financial and tax mechanisms of regulation. This is due to the fact that the purpose of the work was to study the practical application of financial inclusion.

This problem is partially solved in paper [9], where attention is paid to the justification of the main discussion issues and directions of modernization of tax mechanisms for the formation of budget revenues. The author proved that the digital transformation of tax mechanisms stimulates the development of digital society in Ukraine but the state of its implementation is unsatisfactory and does not meet the requirements of digitalization. Therefore, according to the author of work [9], the reform process should be accelerated and aimed primarily at adhering to the principles of transparency and combating fraud. However, the study does not take into account the concept of digitalization, which limits the developed directions for improving tax mechanisms.

In this aspect, work [10] draws attention to the positive impact of the introduction of digitalization and its benefits. The author substantiates the existing problems of introducing digitalization into financial and tax state mechanisms and summarizes the main risks. Such risks include the risk of dissemination of false information, the risk of violation of the rules of personal data protection, the risk of blocking work.

An unresolved component of the problem in work [10] is the lack of assessment of the proposed changes, which is due to the choice as a method of research of the formal-logical analysis of regulatory legal acts.

The positive impact of digitalization of various aspects of the financial and tax system of the country is emphasized in work [11], which substantiates its approach to building a tax mechanism and individual financial levers of the state. However, the question of the peculiarities of financial and tax policy under martial law still remains unresolved, due to objective reasons for different time intervals of study [11] and the beginning of a full-scale Russian invasion of Ukraine.

At the same time, paper [12] considers digitalization in three aspects: the process, the result, and the factor of socio-economic changes that are at different levels of development. The authors propose a model of a comprehensive renewal of the country in the context of Ukraine's integration into the European digital market, which ensures reindustrialization, stabilizes the market, harmonizes the structure of society, etc. But issues related to the improvement of financial and tax mechanisms remained unresolved. The reason for this may be the fact that the authors focused on the macro level, proposing their own approach to the digitalization of the state.

In [13], the method of increasing the efficiency of assessing the state of the monitoring object in special-purpose information systems is substantiated. It is the approach outlined in this paper that should be used in the process of reforming the existing financial and tax mechanisms in order to increase the efficiency of control and supervisory procedures. At the same time, the work does not take into account the peculiarities of the financial and tax information systems, which is why the effectiveness of the application of the method may be ambiguous.

More applied research is reported in [14–16]. In particular, the authors of work [14] proved that one of the most important criteria for digital transformation is the level of information transparency and built a morphological matrix of digital transformation. To ensure a high level of transparency, according to the authors, it is advisable to introduce new digital technologies. In addition, paper [14] analyzes endogenous and exogenous factors that contribute to sustainable development or block the process of introducing digital technologies. It has been found that a significant obstacle is the psychological barriers associated with the reluctance to use digital technologies in the work process. Similar to each other are works [15, 16], which investigated the experience of financial and tax impact, in particular, proposed an approach to the implementation of performance indicators of financial institutions used in Japan and Oman.

The conclusions and scientific and practical results of the outlined works are quite appropriate and can be fully adapted to the processes of improving financial and tax mechanisms in order to overcome the socio-economic crisis caused by martial law in Ukraine.

Radically different is the approach proposed in [17], the authors of which insist that the effectiveness of digital transformation processes depends on the leadership of bodies and institutions, on their responsibility and competence. The importance of the human factor in the context of the effectiveness of the implementation of digital reforms is also emphasized by the authors of [18]. At the same time, the issues of direct improvement of financial and tax mechanisms

remain unresolved. This is due to subjective reasons, namely the fact that the authors of works [17, 18] focused their attention on the study of exclusively the problems of the human factor in the effectiveness of the processes of digitalization of the financial sector.

The solution of existing problems on the way to the introduction of digital technologies into existing financial and tax mechanisms through the development of a digital transformation strategy (DTS) is proposed by the authors of work [19], the basis of which is the experience of European financial service providers in this context. The authors of the work proved that the creation of DTS is a highly dynamic process that involves iterations of learning and action. Thus, work [19] focuses on the micro level of the introduction of financial technologies while the issue of state mechanisms remained unresolved.

Paper [20] discusses issues related to digital finance, proving that digital finance and financial availability have several advantages for users of financial services, digital finance providers, rights, and the economy. The digital finance issues discussed in the article are relevant to current country-level debates and projects aimed at expanding access to financial services through digital finance. At the same time, the results of work [20] were obtained on the basis of theoretical analysis. Experimental verification of the developed provisions in the work is not given due to the complexity of the selected object of study.

The author of work [21] insists on the need to take into account the increase in mobility and the introduction of new forms of financial and tax impact, emphasizing the need for international coordination due to the risk of expanding the possibilities of digital financial fraud. In addition, it is important when settling financial relations to understand the degree of financial freedom in the implementation of financial transactions, the development and implementation of new financial and tax mechanisms. Unresolved issues remained related to the use of the principles of digital transformation in the formation of financial and tax mechanisms. This is due to the fact that the work is focused on tax and budgetary measures of the state fiscal policy. At the same time, digital transformation involves streamlining and increasing the transparency of such policies by automating processes.

So, firstly, the reviewed studies [8–21] either relate to individual components of the financial and tax mechanisms operating in the country, or, conversely, are generalized and contain almost no specific recommendations for ensuring the effectiveness of such mechanisms. Secondly, in works [8–21], the problems of reforming the existing financial and tax mechanisms are investigated. However, the issues of not only digital transformation but also the importance of the anti-crisis component of such mechanisms remained unattended. At the same time, the processes of digital transformation and strengthening of the anti-crisis impact on the existing financial and tax mechanisms should be considered exclusively in symbiosis. This approach will contribute to the coordination of directions for improving financial and tax mechanisms and, as a result, to ensure their effectiveness and efficiency.

Thus, the socio-economic crisis caused by martial law in Ukraine requires a combination of improving the legal regulation of financial, tax, and information relations, due to the urgent need to introduce digital technologies in the sphere under consideration.

3. The aim and objectives of the study

The aim of this study is to develop conceptual provisions for the formation of financial and tax mechanisms to overcome the socio-economic crisis caused by martial law, based on the principles of digital transformation.

This will make it possible to adapt the existing financial and tax mechanisms to the peculiarities of the functioning of the state's financial system under martial law.

To achieve the set aim, the following tasks have been solved:

- to identify the key elements of financial and tax mechanisms that should be primarily revised in order to overcome the socio-economic crisis caused by martial law;
- to highlight the shortcomings of the functioning of such elements;
- to determine the most influential factors of the effectiveness of financial and tax mechanisms to overcome the socio-economic crisis caused by martial law;
- to determine the directions of formation of financial and tax mechanisms, taking into account the principles of digital transformation.

4. The study materials and methods

The object of the study is the process of overcoming the socio-economic crisis in terms of improving financial and tax mechanisms.

The hypothesis of the study was that by introducing the principles of digital transformation into the elements of financial and tax mechanisms, it is possible to reduce the negative impact of the consequences of the socio-economic crisis caused by martial law.

The theoretical and methodological basis of this study was the fundamental foundations of financial law, social security law, financial and tax management, the concept of anti-crisis policy, digital transformation projects in various spheres of public relations. In addition, the scientific works of scientists aimed at solving various aspects of the outlined problems, the development of European experience were used.

In the process of research, general scientific and specific methods were applied. When building the key elements of the existing financial and tax mechanisms, the method of analysis, synthesis, structurally logical method, the method of systematization and generalization were used. To identify shortcomings in the existing financial and tax mechanisms and find ways to improve them, methods of logical generalization, theoretical and abstract analysis were applied. The study of experience in applying the developments of digital transformation in the reform of financial and tax mechanisms was carried out using the method of comparative analysis. The analysis of factors influencing the effectiveness of financial and tax mechanisms for overcoming the socio-economic crisis caused by martial law in the conditions of digital transformation and their ranking by significance was carried out using Kendall's correlation-regression analysis methods. Generalization of recommendations for improving financial and tax mechanisms to overcome the socio-economic crisis caused by martial law in the context of digital transformation was carried out using system analysis.

5. The results of research on financial and tax mechanisms to overcome the socio-economic crisis in the context of digitalization

5.1. Key elements of financial and tax mechanisms in the context of the socio-economic crisis

The choice of elements of financial and tax mechanisms was carried out on the basis of the main problems faced by business entities under martial law, which causes a socio-economic crisis. In particular, this is the inability to carry out fully economic activities, forced termination of activities, delay in the payment of wages, mandatory payments to the budget, etc. The list of elements is distinguished on the basis of the analysis of scientific publications [8–21]. The results of the analysis are shown in Fig. 1.

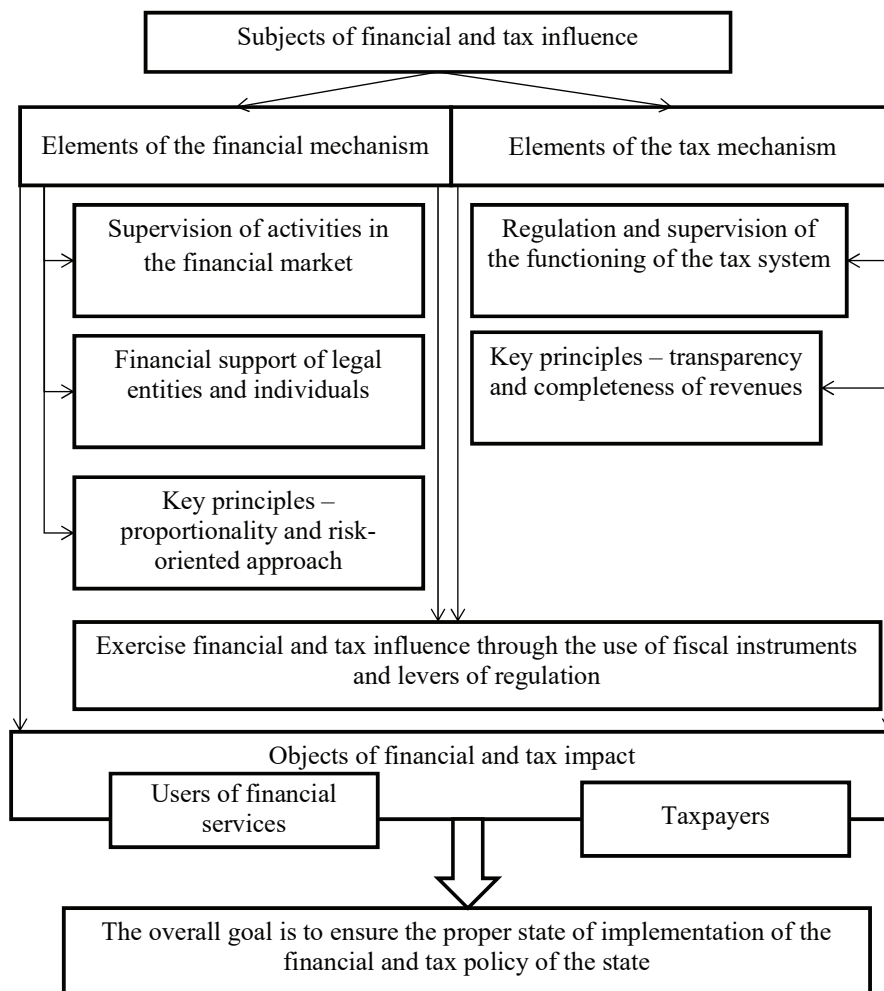


Fig. 1. Key elements of financial and tax mechanisms under martial law

As can be seen from Fig. 1, the priority revision, taking into account the need to overcome the socio-economic crisis caused by martial law and the requirements of digital transformation, needs to be improved:

- types of supervision over activities in the financial market, which should be reduced to remote verification of financial market participants for the legality and rationality of activities;
- financial support of legal entities and individuals, which should be strengthened taking into account the requirements of wartime;

- regulation and supervision of the functioning of the tax system, reorientation of the tax system from fiscal to regulatory and incentive.

In addition, the general goal of financial and tax mechanisms to ensure the proper state of implementation of the state's financial and tax policy to ensure overcoming the socio-economic crisis caused by martial law by methods of financial and tax influence should be revised. Digital transformation in this case becomes an effective tool for simplifying the interaction between subjects and objects of financial and tax impact.

5.2. Disadvantages of functioning of elements of financial and tax mechanisms under martial law

It is appropriate to make a remark that the need to reform the existing financial and tax mechanisms, taking into account their focus on overcoming the socio-economic crisis caused by martial law, is realized not only by scientists but also by the main regulators of the financial and tax system.

Even in peacetime, administrative services that are provided online in electronic versions have been developed in the field of taxation. This includes, in particular, the Taxpayer's Electronic Cabinet, as well as changing approaches to interaction between taxpayers and the bodies of the State Tax Service [22]. During the martial law, the following anti-crisis measures were introduced:

- tax anti-crisis mechanisms have been introduced. Thus, among the tax anti-crisis mechanisms, it is possible to single out the provision of opportunities for individuals and legal entities with an income of up to UAH 10 billion, which is equivalent to EUR 263,6 million to pay a single tax of 2%. At the same time, it is charged according to the rules established for the 3rd group of single tax payers, that is, with exemption from income tax, VAT, and other payments. In addition, it is proposed to introduce for individual entrepreneurs of the first and second groups the voluntary payment of a single tax and to establish a preferential VAT rate of 7%. The expediency of eliminating the excise duty on fuel and exemption from personal income tax of the amount of financial assistance of such a category of the population as victims of military aggression of the Russian Federation is substantiated. It is proposed to exempt from taxation and from the accrual of excise duty the transfer of fuel as humanitarian aid and to cancel the accrual of penalties for late collection of VAT. It has been proven appropriate to fix a tax discount of 16% (instead of 4% now) on donations to non-profit organizations, VAT exemption for goods destroyed during

the war, as well as transferred to the needs of the military. In addition, it is proposed to cancel the payment for land, environmental tax, minimum tax liability for land located in the territories where hostilities are taking place. The abolition of the collection of SSC for themselves for entrepreneurs conducting independent professional activities and members of the farm has been introduced. Additional measures may be the suspension of the accrual of fines and penalties for the collection of SSC and the legislative consolidation of the permit not to pay SSC for mobilized workers for individual entrepreneurs of the second and third groups;

- a mechanism for the introduction of loan repayment holidays and suspension (cancellation) in some cases of interest on loans, including mortgage loans, has been developed;

- the mechanism of financial support for different segments of the population, entrepreneurs, internally displaced persons, etc. has been applied. At the same time, financial assistance is provided both at the expense of the state and at the expense of international organizations in which the state acts as an intermediary.

Therefore, it can be stated that there are significant results on the way to reforming the existing financial and tax mechanisms, taking into account the ability to overcome the socio-economic crisis caused by martial law.

Along with this, it is advisable to note that taking into account the imperfect legal framework [23] the reform processes are rather slow, the requirements of digital transformation are partially taken into account [24], the optimality of the developed measures has not been finally proven [25]. The outlined comments require additional proposals on reforming the existing financial and tax mechanisms to overcome the socio-economic crisis caused by martial law in conditions of digitalization.

5.3. Determining the most influential factors of the effectiveness of financial and tax mechanisms under martial law

Justification of the directions of improvement of financial and tax mechanisms is based on changes that should be constructive and contribute to the achievement of the goal of their implementation [26, 27]. It is necessary to assess the factors influencing the effectiveness of such mechanisms and by taking into account the results obtained to develop areas of improvement. Such a remark is based on the fact that without a balanced process of assessing the existing factors of influence, it is not advisable to draw conclusions about the prospects for improving the efficiency of existing mechanisms.

To substantiate the assessment of factors of influence, it is proposed to use the Kendall tau rank correlation coefficient method based on the calculation of the Kendall tau rank correlation coefficient as a measure of the linear relationship between random variables.

The Kendall correlation is rank, that is, not numerical values are used to assess the strength of the correlation but the corresponding ranks.

To this end, first of all, it is necessary to single out the factors influencing the effectiveness of financial and tax mechanisms to overcome the socio-economic crisis caused by martial law in the context of digital transformation.

As the basis for distinguishing such factors, in our opinion, it is advisable to choose a set of principles of

digital financial inclusion G 20 [28], adapted to the peculiarities of building financial and tax mechanisms under martial law.

The analysis of these principles made it possible to single out the factors influencing the effectiveness of financial and tax mechanisms for overcoming the socio-economic crisis caused by martial law in the conditions of digital transformation, which is given in Table 1.

Table 1

Factors influencing the effectiveness of financial and tax mechanisms, taking into account the principles of digital transformation

Principles of digital financial inclusion G 20, adapted to the features of building financial and tax mechanisms	Factors influencing the effectiveness of financial and tax mechanisms	Symbol of the factor
Implementation of the protection system	Focus on protecting the rights of taxpayers and users of financial services	x ₁
Effective financial control and supervision	Availability of a reliable system for assessing data under martial law	x ₂
Maintaining the principle of balance and balance between innovation and risk	Availability of an analysis system	x ₃
	Balancing innovation and risk to digital access	x ₄
Promotion of digital services	A well-established system for promoting digital services	x ₅
Development of appropriate customer identification systems	An effective anti-digital fraud system	x ₆
Promoting digital and financial literacy and public awareness	Measures to ensure digital and financial literacy and public awareness	x ₇
Creation of a rational infrastructure of financial and tax mechanisms	Availability of rational infrastructure	x ₈
	The level of use of financial, information and communication technologies	x ₉
Creating a favorable legal and regulatory framework	Excellence in the legal and regulatory framework for digitalization of crisis response measures	x ₁₀

Source: singled out personally by unknown author from [28]

The factors from Table 1 were offered to experts for evaluation. At the same time, employees of tax and financial authorities were elected as experts. It should be emphasized that the purpose of this expert study does not imply the indication of personal data of selected experts. The main purpose of the expert study is to substantiate the expediency of applying an approach to the assessment of factors of influence, based on the method of correlation analysis. Thus, to determine the sufficiency of the level of consistency of expert opinions, the Kendall's concordance coefficient was applied, and the results of the expert study are given in Table 2.

Table 2

Results of expert assessment of factors influencing the effectiveness of financial and tax mechanisms

Ranks of factors→	x ₁	x ₂	x ₃	x ₄	x ₅	x ₆	x ₇	x ₈	x ₉	x ₁₀	Linked Rank Score
Experts↓											
1	9	3	9	6	9	5	8	9	4	4	18
2	9	5	9	7	10	5	8	9	4	5	12
3	8	5	10	7	9	6	10	7	5	5	18
4	10	5	8	5	8	6	9	6	3	8	18
5	8	4	8	4	10	5	7	8	6	4	12
Total	44	22	44	29	46	27	42	39	22	26	78

The results of the analysis of the data given in Table 2 indicate that there is no complete consistency of opinions between experts, and, therefore, data from Table 2 were additionally analyzed.

First, the factors in terms of importance are distributed as follows (Table 3).

Table 3

Ranking of factors influencing the effectiveness of financial and tax mechanisms

Factor	Sum of ranks
x ₁₀ Excellence in the legal and regulatory basis for digitalization of measures to combat the socio-economic crisis caused by martial law in Ukraine	46
x ₈ Availability of rational infrastructure	44
x ₉ The level of use of financial, information and communication technologies	44
x ₆ An effective anti-digital fraud system	42
x ₂ Availability of a reliable system for assessing data under martial law	39
x ₇ Measures to ensure digital and financial literacy and public awareness	29
x ₄ Balancing innovation and risk to digital access	27
x ₁ Focus on protecting the rights of taxpayers and users of financial services	26
x ₃ Availability of an analysis system	22
x ₅ A well-established system for promoting digital services	22

So, as can be seen from Table 3, the most significant factors were the availability of a rational infrastructure, the perfection of the legal and regulatory basis for digitalization, an effective system for combating digital fraud, etc.

In turn, such factors as a well-established system for promoting digital services and the availability of a system for analyzing supply and demand for digital services in the context of the implementation of financial and tax policy have the least impact.

It is taking into account the most influential factors that directions should be developed to improve the financial and tax mechanisms for overcoming the socio-economic crisis caused by martial law in the context of digital transformation.

Secondly, to determine the sufficiency of the level of consistency of expert opinions, the Kendall's concordance coefficient was applied (1):

$$W = \frac{12}{m^2(n^3 - n)} \sum_{j=1}^n \left(\sum_{i=1}^m x_{ij} - \frac{m(n+1)}{2} \right)^2, \tag{1}$$

where m is the number of experts;

n – number of factors;

x_{ij} is the rank of the i -th factor, estimated by the j -th expert.

If related (identical) ranks are found in the ranks of certain experts, then the concordance coefficient must be adjusted taking into account the indicator of the named ranks. Then (1) is pretorted to (2):

$$W = \frac{12}{m^2(n^3 - n) - m \sum_{j=1}^n T_j} \sum_{j=1}^n \left(\sum_{i=1}^m x_{ij} - \frac{m(n+1)}{2} \right)^2, \tag{2}$$

where T_j is the indicator of the bound ranks in the ranking of the j -th expert, calculated by formula (3):

$$T_j = \sum_{k=1}^{H_j} (t_k^3 - t_k), \tag{3}$$

where H_j – the number of groups of identical in the ranking of the j -th expert;

t_k – the number of identical ranks in the k -th group of bound ranks when ranked by the j -th expert.

So, the concordance coefficient in this case is

$$W = \frac{12}{5^2(10^3 - 10) - 5 \cdot 78} \cdot 1,294.5 = \frac{15,534}{24,360} = 0.638,$$

which indicates the presence of an average degree of consistency of expert opinions.

To assess the significance of the concordance coefficient, we use the Pearson matching criterion (4):

$$\chi^2 = m(n-1)W = 5 \cdot (10-1) \cdot 0.638 = 28.71. \tag{4}$$

The theoretical value of the Pearson criterion χ^2 for the number of degrees of freedom $n-1=10-1=9$ and at a given significance level $\alpha=0.04$ is $16.9 > 28.71$. Therefore, the calculated value of the Kendall's concordance coefficient is not random, the hypothesis of a rank relationship between the opinions of experts was confirmed, the concordance coefficient can be trusted, and the conclusions obtained on its basis are fair.

So, in the context of this study, using Kendall's method of correlation-regression analysis, there are separate factors influencing the effectiveness of financial and tax mechanisms to overcome the socio-economic crisis caused by martial law in the context of digital transformation in terms of significance.

5. 4. Directions of formation of financial and tax mechanisms taking into account the principles of digital transformation.

Taking into account the requirements of digital transformation in order to overcome the consequences of the socio-economic crisis caused by martial law, financial and tax mechanisms can be changed as follows:

- to develop a unified infrastructure of financial and tax mechanisms that must meet the requirements of martial law.

At the same time, in this structure, it is advisable to revise the distribution of powers between the subjects of control, to avoid the “monopoly” position in the implementation of control and supervisory functions, to transfer most of the powers to remote mode;

- to develop programs for accelerated adaptation of the legal and regulatory basis for digitalization of measures to combat the socio-economic crisis caused by martial law in Ukraine. To this end, to update the electronic cabinets of taxpayers, taking into account legal innovations, introduced benefits and changes in taxation for the duration of martial law. In addition, effective ways to digitalize the processes of obtaining all forms of financial assistance should be introduced. In addition, it is necessary to simplify the procedure for using financial services through the use of digitalization methods and establish direct digital communication between entities and objects of financial and tax mechanisms;

- to introduce an effective system of counteraction to digital fraud, which should be based on the principles of permanency, continuity, multi-level internal control;

- to ensure the proper level of use of financial, information and communication technologies. To this end, develop provisions for adapting the existing experience of different countries on the outlined issue to the national environment, using more important developments of foreign countries;

- to develop and implement a system for measuring and evaluating data that will meet the criteria of reliability and rationality under martial law.

The use of these proposals will ultimately contribute to the achievement of efficiency and transparency of the financial market, European integration, and approximation to world standards, overcoming the negative impact of threats to financial and tax mechanisms.

6. Discussion of results of the study of financial and tax mechanisms to overcome the socio-economic crisis

In 2022, the functioning of financial and tax mechanisms is accompanied simultaneously by rapid processes of digital transformation and the destructive impact of martial law. Therefore, such mechanisms require a thorough revision in terms of their key elements (Fig. 1). In contrast to [9], where the tax mechanism is represented by the tax collection subsystem and the subsystem of control and ensuring the payment of taxes, the approach shown in Fig. 1 takes into account the financial component. This allows us to revise the purpose of financial and tax mechanisms from purely fiscal to regulatory and supportive, which corresponds to the tasks of digitalization and the realities of functioning during the war.

The anti-crisis measures adopted by the state tax authorities include stimulating and supporting fiscal and financial measures. However, they are urgent and temporary. These measures are not aimed at improving the legal framework, reforming or transforming, and their optimality has not been proven. So, in order to substantiate the directions of improvement of financial and tax mechanisms, an assessment of factors influencing their effectiveness was carried out through an expert survey. The basis for distinguishing such factors (Table 1) is a set of principles of digital financial inclusion G 20. In contrast to [8], where these principles are applied to financial services, in Table 1 they are adapted

to the peculiarities of the functioning of financial and tax mechanisms under martial law.

Based on the results of processing the results of the expert survey (Table 3), the most significant factors were established, which were the basis for the developed directions for improving financial and tax mechanisms to overcome the socio-economic crisis caused by martial law in the conditions of digital transformation. First of all, it is the development of a rational infrastructure of financial and tax mechanisms; improving the legal and regulatory framework; introduction of a multi-level anti-digital fraud system. In addition, such factors include ensuring the adaptation of financial and tax legislation, taking into account foreign experience in building financial and tax mechanisms to overcome the crisis caused by martial law. In addition, one of the factors is the introduction of a data measurement and evaluation system that will meet the criteria of digital reliability and rationality. In contrast to [19, 20], where attention is paid to the digital transformation of financial and tax mechanisms, the achievement of this study is the development of directions for their improvement to overcome the socio-economic crisis caused by martial law. The basis of the developed mechanisms is the approach used for the needs of financial and tax policy to assess the factors influencing the effectiveness of existing mechanisms.

The practical significance of the research results is the possibility of applying proposals in the activities of financial and tax authorities, taxpayers, users of financial services. In addition, the proposals will be useful in the process of legislative activity in order to ensure the effectiveness of the legal regulation of social relations.

At the same time, as a development of the outlined research problems, it is advisable to point out the need for practical detailing of recommendations for improving financial and tax mechanisms for overcoming the socio-economic crisis in the context of digital transformation.

The limitation of this study is that the results obtained (Table 3) are adequate when they are applied in terms of improving financial and tax mechanisms in the context of digitalization. It is under the condition of the introduction of legally enshrined requirements for the digitalization of financial and tax mechanisms that the results obtained are able to provide practical and theoretical expectations.

At the same time, the disadvantages are certain factors that may make it impossible to ensure practical or theoretical expectations from the use of the results of this study, namely: fragmentary inhibition of the digitalization processes of individual links of financial and tax mechanisms.

7. Conclusions

1. The key elements of financial and tax mechanisms have been identified, which should be primarily revised in order to overcome the socio-economic crisis caused by martial law. These include supervision of activities in the financial market; financial support of legal entities and individuals, the principle of proportionality and risk-based approach, regulation and supervision of the functioning of the tax system, principles of transparency and completeness of revenues. It is substantiated that such a mechanism is represented by certain entities that, with the help of levers of financial and tax policy, influence the objects of regulation

in order to ensure the proper state of implementation of the financial and tax policy of the state.

2. The shortcomings of the functioning of the existing financial and tax mechanisms for overcoming the socio-economic crisis caused by martial law are highlighted. These include the slow nature of the reform, non-compliance with the principle of unanimous consideration of the requirements of digital transformation and anti-crisis direction, weakening of the main control and supervisory functions that do not meet the principles of rationality and effectiveness.

3. The factors influencing the effectiveness of financial and tax mechanisms by adapting the declared principles of digital financial inclusion G 20 to the peculiarities of the functioning of such mechanisms are substantiated. Using Kendall's correlation-regression analysis tools, factors were evaluated, which made it possible to rank them by significance. It has been established that the most significant factors are the availability of a rational infrastructure, the perfection of the legal and regulatory basis for digitalization, an effective system for combating digital fraud.

4. Among the directions of improvement of financial and tax mechanisms are the development of a rational infrastructure of financial and tax mechanisms; development of a program to improve the legal and regulatory framework for digitalization of measures to combat the socio-economic crisis caused by martial law in Ukraine. In addition, it is

worth highlighting the introduction of a multi-level system of permanent and continuous counteraction to digital fraud; development of directions for adaptation of modern experience in terms of the application of financial, information and communication technologies to the national environment. In addition, it is considered expedient to introduce a data measurement and evaluation system that will meet the criteria of digital reliability and rationality under martial law.

Conflicts of interest

The authors declare that they have no conflicts of interest in relation to the current study, including financial, personal, authorship, or any other, that could affect the study and the results reported in this paper.

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Data availability

All data are available in the main text of the manuscript.

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