

eISSN 2345-0355. 2022. Vol. 44. No. 4: 443-450 Article DOI: https://doi.org/10.15544/mts.2022.44

# DIGITALIZATION OF TAX ADMINISTRATION IN UKRAINE: RISKS AND OPPORTUNITIES

Nataliia Lagodiienko <sup>1</sup>, Mariia Pozhydaieva <sup>2</sup>, Denys Krylov <sup>3</sup>

<sup>1</sup>Dr. Sc., Assoc., Prof., Mykolaiv National Agrarian University, Mykolaiv, Ukraine, E-mail address: besedina77@gmail.com

<sup>2</sup>Dr. Sc., Assoc., Prof., Kyiv National Economic University named after Vadym Hetman, Ukraine, E-mail address: pozhydaieva.mariia@kneu.edu.ua

<sup>3</sup>Dr. Sc., Assoc., Prof., Zaporizhzhia National University, Zaporizhzhia, Ukraine, E-mail address: krylov.denys2021@gmail.com

Received 07 10 2022; Accepted 10 11 2022

#### **Abstract**

The purpose of the article is to study the risks and opportunities of digitalization of tax administration in Ukraine. In the article, the authors used both special and general methods of scientific research, namely: analysis and synthesis, abstract-logical, graphic, bibliometric, dialectical, methods of collecting, processing and systematizing information. It has been proven that today the processes of digitization have covered all spheres of society in general and tax administration in particular. The expediency of digitalization of tax administration to increase the efficiency of the process of mobization of tax revenues is substantiated. The reasons for the inhibition of the drivers of digital trends in the domestic tax administration have been determined. The analysis of the identified trends of digitalization of tax administration in Ukraine was carried out, tax risks were determined and the author's vision of the implementation of modern imperatives of digital trends in the tax field was proposed.

Keywords: tax system, digitization, digital economy, tax administration, risks, tax revenues.

**JEL Codes:** E62, H21, K34.

#### Introduction

The financial basis of the functioning of the state is taxes, because they provide the majority of the revenues of the budgets of various levels, mobilizing monetary resources to finance state expenditures. In modern economic conditions, taxes serve not only as a source of filling budgets, but also as an effective tool for state regulation of the economy, therefore they play an important role both in ensuring the financial stability of the state and in achieving the social welfare of citizens. The mismatch of tax revenues to the budgets with the financial needs of the state aggravates the problem of increasing the efficiency of tax administration, the solution of which requires a systematic approach. Today, digitalization processes have covered all

spheres of society. Digitalization and tax administration did not pass by. It makes it possible to ensure greater stability of state revenues with minimum costs for tax administration, effectively combat tax evasion, and increases the certainty of tax rules. Digitization in the field of taxation requires not only the improvement of the administration system and tax payment mechanisms, but also changes in the tax system itself and tax policy vectors related to digitalization.

The purpose of the article is to study the risks and opportunities of digitalization of tax administration in Ukraine.

Copyright © 2022 Author(s), published by Vytautas Magnus University. This is an open access article distributed under the terms of the Creative Commons Attribution Non-Commercial 4.0 (CC BY-NC 4.0) license, which permits unrestricted use, distribution, and reproduction in any medium provided the original author and source are credited. The material cannot be used for commercial purposes.

### Literature review

Theoretical and practical aspects of tax administration were studied by both foreign and domestic scientists. The principles of taxation are covered in the works of well-known domestic and foreign economists: Filyppova S. (2021), Grigoraș-Ichim C.E. (2018), Grosu V. (2021), Navarro M. (2022), Pylypenko O. (2022) and Zhavoronok A. (2022). The peculiarities of tax administration were studied by scientists Abramova A. (2021), Dolozina I. (2019), Garafonova O.

(2021), Hodžić S. (2019), Khudolei V. (2021), Kosach I. (2022), Popelo O. (2017), Shkarlet S. (2017), Tarasenko A. (2017), Tulchynska S. (2022) and other.

Despite the large number of publications on digitization in general, currently important issues of digitization of the domestic tax administration system in particular remain insufficiently researched, as evidenced by the global statistics of bibliographic analysis of published articles in the Scopus database (69 articles in total). The key directions of these studies are presented in Fig. 1

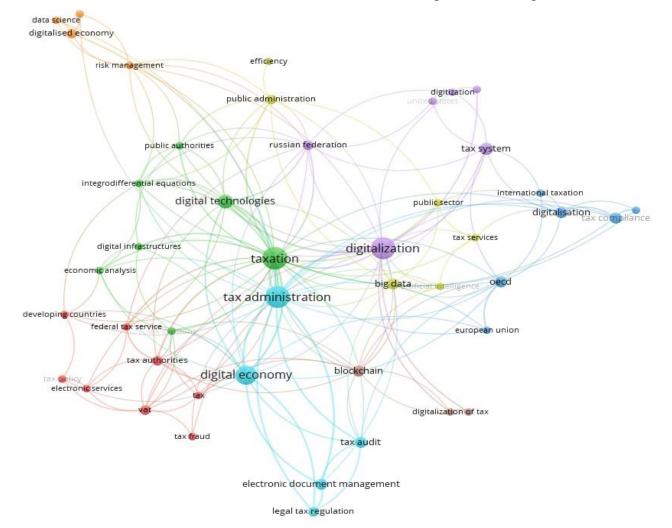


Figure 1. Graphic map of keywords in publications, in which titles the word "digitalization of tax administration" is met

\*Source: compiled by the author based on the analysis of the Scopus database and using the tools of the VOSviewer program.

The study digitalization of tax administration according to Scopus was first published in 1 article in 2017. In the future, the dynamics of publication activity was as follows: 2018 – 6 articles, 2019 – 12 articles,

2020 – 12 articles, 2021 – 18 articles, 2022 – 18 articles. South Africa, Ukraine, Australia, Turkey, Spain, Denmark, United Kingdom, Switzerland, Norway, France, Austria and others are currently the world centers for the



eISSN 2345-0355. 2022. Vol. 44. No. 4: 443-450 Article DOI: https://doi.org/10.15544/mts.2022.44

activation of research by scientists in the field of digitalization of tax administration based on the analysis of publications in the Scopus

database.

The development of digital technologies cause radical changes in the tax administration system (Kychko I., 2021). This means that specialists in this field will have to be able to apply the procedures of analysis of large data sets, anti-crisis management, project management and strategy transformation (Djakona A., 2021). Leading countries are using modern computer increasingly technologies in the process of tax administration throughout the entire functional management cycle: starting from the stage of taxpayer registration and ending with the assessment and payment of taxes (Nikiforov P., 2022). Even in Ukraine, which, unfortunately, is currently on the periphery of innovative processes, new tax administration technologies are gradually being introduced.

These arguments determined the choice of the topic of scientific research, definition of its purpose, tasks and structure.

# Methodical approach

The article uses both special and general scientific methods of research. determining the topicality of the topic, the bibliometric and dialectical methods of scientific knowledge were used as a basis, with the help of which the ranking of scientific research in this field was carried out using the tools of the VOSviewer program. The methods of collecting, analyzing, processing and systematizing information were also used in the construction of the grouping of the Ukraine's regions by indicators of tax administration map to reflect the effectiveness of tax revenue mobilization in dynamics. When writing the article, the authors used a set of research methods, such as analysis and synthesis, to determine the current digital trends in the tax field based on existing tax and opportunities. Abstract-logical method - for forming conclusions and proposals regarding digitalization of tax administration in Ukraine. The graphic method is for visual representation of the results of this study.

#### Results

In modern conditions, the process of taxation of business entities plays an important role in the national economic policy of each country, which is due to the importance of its functions, without which the modern state, and therefore society, cannot exist – fiscal and regulatory. Tax revenues are the basis of filling the revenue part of the budget, and therefore the main source of financing state needs.

Digitization of tax administration is a system of measures using modern ICT technology to transfer information into digital form throughout the functional cycle of managing tax relations, starting from the stage of taxpayer registration and ending with assessment, payment of taxes, as well as the involvement of a greater number of tools for taxpayers and regulators bodies.

The special capabilities of administration as a set of decisions, procedures and actions of officials of controlling bodies, in particular the possibilities of digitalization of tax administration, are a modern effective tool for achieving tax goals. It is thanks to the digitalization of tax administration that acceptable results are achieved - the fight against tax evasion is carried out, the stability of public finances is increased, the procedures for fulfilling the tax obligations of taxpayers are simplified and become shorter in time, and administrative costs are reduced. processes should be facilitated by the following adaptive changes in the architecture of the tax system in accordance with digitalization processes. The key aspects of the indicated state management actions should be the prediction of the consequences and the forecasting of promising directions for the use of digitalization elements (Fig. 2).

Analysis of the results of the application of digitization tools in the practice of domestic

tax administration allows us to state the fact of their undeniable impact on the tax base. It is mainly about the relative, and sometimes absolute processes of automation and robotization of tax liability identification and its fulfillment, as well as the possibility of trading activities based on online platforms and social networks.

Globalization processes and digitalization of the world economy are necessarily connected with Industry 4.0 as a driver of digital trends in all spheres of social economic life, in particular administration. We consider the identified areas of influence of Industry 4.0 on the digitalization of the tax sphere to be: big data, the use of cloud storage, the Internet of Things, the transition to digital currencies, artificial intelligence, cyber security, the introduction of biometric authentication systems, blockchain technology and the decentralization of databases and smart contracts; automation of taxation.

Slowing down the drivers of digital trends in the domestic tax administration can be carried out on the basis of the existence of risks. Tax risk management is a multifunctional management process and a system of measures to identify deviations in the process of tax administration, find out the causes of occurrence and prevent tax revenue losses. Current trends in the study of the riskology of tax administration with the active

implementation of digitalization make it possible to determine a set of risks, in particular: the complexity of controlling transactions carried out using P2P services, social channels, foreign exchanges; erosion of the tax base; virtual offshoring; reduction of tax revenues to the budget in connection with the withdrawal of part of the income of economic entities from the influence of national tax legislation, reduction of tax payments from traditional goods and services; tax evasion due to the difficulty of tracking and identifying sellers of digital goods and services; the possibility of expanding the tax base due to digital data; increase in cash flow bypassing the traditional banking system from cryptocurrency-related activities; complication of tax administration; reduction of tax revenues due to robotization, etc.

Among the system of possible risks, information risks also have a specific weight, which can grow at a rapid pace due to disruption of data exchange processes, low level of openness of access to public information. and insufficient level management automation. We see the solution to the stated possible threats in the formation of the effective functioning of state electronic services: the taxpayer's electronic cabinet; chatbot (Telegram, Messenger and Viber) and automated information systems of authorities.



eISSN 2345-0355. 2022. Vol. 44. No. 4: 443-450 Article DOI: https://doi.org/10.15544/mts.2022.44

Digital economy and tax **Benefits:** sphere - automation and - high level of competitiveness; robotization of processes; - preservation of financial and natural resources; - remote sales of goods - use of arrays to optimize work; Impact on the tax base and services. - customer loyalty; - formation of corporate image. **DIGITALI-Directions:** - big data; ZATION Industry 4.0 use of cloud storage; - Internet of things; - transition to digital currencies; -Artificial Intelligence; - cyber security; blockchain technology Impact on tax - introduction of biometric authentication systems decentralization of databases; administration smart contracts: automation of taxation. Automation of **Benefits:** Transition from Emanagement reduction of tax administration costs; Government to E-Governance - reduction of the administrative burden and administrative barriers of taxpayers; - risk reduction during tax audits; State electronic account of the taxpayer; - expanding the geography of business and tax chat bot (Telegram, Messenger and electronic management. services AIS of tax authorities. **Electronic Tax Management System (ETMS)** electronic accounting system mobile application IRS2Go electronic tax system (MeF) index of digitization of civil standard tax audit documents Digital trends in the tax field (SAF-T) service a system of risk indicators and risk a single electronic platform of tax electronic financial reporting officials assessment models

Figure 2. The role of digital technologies in the tax sphere

Ukraine actively uses the possibilities of digital technologies, including in matters of tax administration. Today, the exchange of information flows between state financial institutions and business entities is inevitable, the means and tools of monitoring and control

are powerfully used, and services for taxpayers are an integral part of their interaction, which is demonstrated in the dynamics by positive trends to increase the amount of mobilized tax payments (Fig. 3).

<sup>\*</sup>Source: generated by the authors.

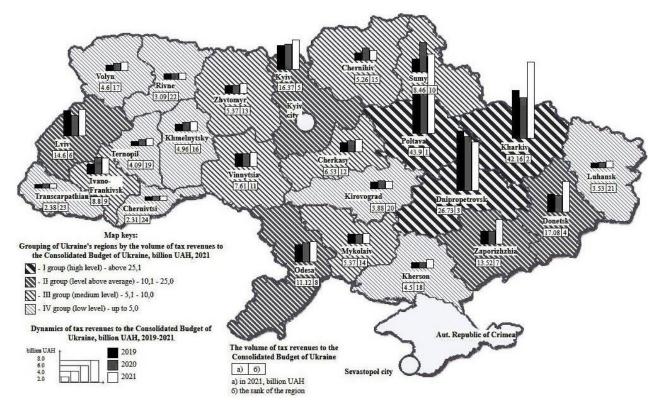


Figure 3. Grouping of the Ukraine's regions by indicators of tax administration

\*Source: generated by the authors based on https://www.ukrstat.gov.ua/

The analysis of the digitization of tax administration in Ukraine, the identified tax risks and the determined role of digital technologies in the tax sphere make it possible author's form an vision of implementation of modern imperatives of digital trends in the tax sphere, taking into account the available results of scientific research on the world stage: electronic tax management system, electronic accounting system of records, a mobile application, an electronic tax system, standard tax audit documents, determination of the digitalization index of the civil service, a system of risk indicators and risk assessment models, a single electronic platform of tax officials.

## **Conclusions**

Currently, digitalization processes have covered all spheres of society. Digitalization and tax administration did not pass by. The study digitalization of tax administration according to Scopus was first published in 1 article in 2017. Thanks to the digitization of tax administration, acceptable results are achieved

- tax evasion is being fought, the stability of public finances is increased, the procedures for fulfilling tax obligations of taxpayers are simplified and shortened, and administrative costs are reduced.

Slowing down the drivers of digital trends in the domestic tax administration can be carried out on the basis of the existence of risks, the key of which are: the complexity of controlling transactions carried out using P2P services, social channels, foreign exchanges; erosion of the tax base; virtual offshoring; reduction of tax revenues to the budget in connection with the withdrawal of part of the income of economic entities from the influence of national tax legislation, reduction of tax payments from traditional goods and services; tax evasion due to the difficulty of tracking and identifying sellers of digital goods and services; the possibility of expanding the tax base due to digital data; increase in cash flow bypassing the traditional banking system from cryptocurrency-related activities; complication of tax administration; reduction of tax revenues due to robotization, etc.



eISSN 2345-0355. 2022. Vol. 44. No. 4: 443-450

Article DOI: https://doi.org/10.15544/mts.2022.44

The analysis of the identified trends in the digitalization of tax administration in Ukraine, the identified tax risks and the established role of digital technologies in the tax sphere made it possible to form the author's vision of the implementation of modern imperatives of digital trends in the tax sphere, in particular: electronic tax management system, electronic accounting system, mobile application, electronic the tax system, standard

tax audit documents, determination of the digitalization index of the civil service, a system of risk indicators and risk assessment models, a single electronic platform of tax officials.

Prospects for further research consist in the study of tax relations between the state and taxpayers, which require the modernization of tax instruments based on the introduction of ICT technology.

#### References

Abramova, A., Shaposhnykov, K., Zhavoronok, A., Liutikov, P., Skvirskyi, I., Lukashev, O. (2021). Ecosystem of VAT Administration in E-Commerce: Case of the Eastern Europe Countries. *Estudios de economía aplicada*, *39*(5).

Dale, S. (2018). The digitalisation of the global economy-some thoughts on the consequences for tax systems and their administration. *ERA Forum*, 19(2), 237–256.

Djakona, A., Kholiavko, N., Dubyna, M., Zhavoronok, A., Fedyshyn, M. (2021). Educational dominant of the information economy development: a case of Latvia for Ukraine. *Economic Annals-XXI*, 192(7-8(2)), 108-124.

Dolozina, I., Shkarlet, S., Dubyna, M. (2019). Budgetary revenue breakdown at the local level of public administration in federal countries. *Baltic Journal of Economic Studies*, 5(3), 218-224.

Dubyna M., Popelo O., Kholiavko N., Panchenko O., Tarasenko A. Features of the Transformation of the Regional Models of the Households' Financial Behavior. Management Theory and Studies for Rural Business and Infrastructure Development. 2022. Vol. 44. No. 1: 117-124.

Filyppova, S., Abramova, A., Vdovenko, N., Kotelevets, D., Lozychenko, O., Malin, O. (2021). Regulatory policy transformation in conditions of nonstationary economy in eastern European countries: practical approach. *International Journal of Computer Science and Network Security*, 21(10), 39-48.

Garafonova, O., Popelo, O., Tulchynska, S., Derhaliuk, M., & Berezovskyi, D. (2021). Functions of public management of the regional development in the conditions of digital transformation of economy. *Amazonia Investiga*, 10(43), 49-58.

Grigoraș-Ichim, C.E., Cosmulese, C.G., Savchuk, D., Zhavoronok, A. (2018). Shaping the perception and vision of economic operators from the Romania – Ukraine – Moldova border area on interim financial reporting. *Economic Annals-XXI*, 173(9-10), 60-67.

Grosu, V., Kholiavko, N., Zhavoronok, A., Zlati, M.L., Cosmulese, C.G. (2021). Conceptualization of model of financial management in romanian agriculture. *Economic Annals-XXI*, 191(7-8(1)), 54-66.

Hodžić, S. (2019). Tax administrative challenges of the digital economy: the Croatian experience. *Ejournal of Tax Research*, 16(3), 762-779.

Khudolei, V., Bespalov, M., Tulchynska, S., Tulchinsky, R., & Kholiavko, N. (2021). Fiscal stimulation of spatial development: the EU Countries' cases. *Financial and credit activity: problems of theory and practice, 1*(36), 124-132.

Kosach, I., Shaposhnykov, K., Chub, A., Yakushko, I., Kotelevets, D., Lozychenko, O. (2022). Regulatory policy in the context of effective public governance: evidence of Eastern European Countries. *Cuestiones Políticas*, 40(72), 456-473

Kychko, I., Popelo, O., Tulchynska, S., Zhygalkevych, Zh., Treitiak, O. (2021). The Impact of Digitalization on the Forms Change of Employment and the Labor Market in the Context of the Information Economy Development. *International Journal of Computer Science and Network Security*, 21(5), 160-167.

Navarro, M. (2022). The Digitalization of Relations Between Citizens and Tax Administrations. *Biosystems & Biorobotics*, 30. https://doi.org/10.1007/978-3-031-04305-5\_20

Nikiforov, P., Zhavoronok, A., Marych, M., Bak, N., Marusiak, N. (2022). State policy regulation conceptual principles of public-private partnership development. *Cuestiones Políticas*, 40(73), 417-434.

Popelo, O. (2017). Methodological approaches to modernization processes of the productive forces in the conditions of Eurointegration. *Scientific Bulletin of Polissia*, 1(1(9)), 218-224.

Pylypenko, O., Matviienko, H., Putintsev, A., Vlasenko, I., & Onyshchuk, N. (2022). Government Tax Policy in the Digital Economy. *Cuestiones Políticas*, 40(72), 279-296.

Shkarlet, S., Dubyna, M. (2017). Essence and features of information society development. *Scientific Bulletin of Polissia*, 2(10(1)), 152-158.

Tarasenko, A., Shkarlet, S., Dubyna, M. (2017). Basic descriptors of the information economy development.

# Nataliia Lagodiienko, Mariia Pozhydaieva, Denys Krylov Digitalization of Tax Administration in Ukraine: Risks and Opportunities

Scientific Bulletin of Polissia, 3(11(1)), 8-15.

Tulchynska, S., Popelo, O., Revko, A., Butko, M., Derhaliuk, M. (2022). Methodological Approaches to the Evaluation of Innovation in Polish and Ukrainian Regions, Taking into Account Digitalization. *Comparative Economic Research. Central and Eastern Europe*, 25(1), 55-74.

Zhavoronok, A., Chub, A., Yakushko, I., Kotelevets, D., Lozychenko, O., Kupchyshyna, O. (2022). Regulatory Policy: Bibliometric Analysis Using the VOSviewer Program. *International Journal of Computer Science and Network Security*, 22(1), 39-48.