PROSPECTS FOR IMPROVEMENT OF VALUE-ADDED TAX IN THE PROCESS OF DIGITALIZATION OF THE RUSSIAN ECONOMY

Olga Karpova – Igor Mayburov

Abstract

The article explores actual transformation of value-added tax (VAT) on the territory of Russia in the context of accelerated digitalization of the economy, and aims to determine the prospects for improvement of value-added tax and tax evasion control. First, various approaches to the definition of digitized economy are being described. Also, a rationale is being substantiated for the provision that digitalization of the economy is the process of implementing, running and adjusting of digital technology, and digital economy is an operational space for the introduced technology. Further, the research considers the major challenges of digitalization of VAT. Then, the terms "digital VAT" and "smart VAT" are being defined. The study suggests that digitalization helps reduce evasion of VAT, and also concludes that the main features of digitalization are: transition to a distant interaction of taxpayers and tax authority; implementation of digital instruments for taxpayers and tax authorities. The study identifies the key elements and levels of prospective models of "smart VAT", calculated and levied without human intervention (blockchain technology). It is expected that tax computation and charge-off from the taxpayer account will be in online mode, without tax returns being filed.

Key words: value-added tax; digitalization of the economy; digital VAT; smart VAT.

JEL Code: H2, O380

Introduction

The digital revolution generates tremendous changes in the social, economic and political spheres, since the Internet, social media, big data and automation are fundamentally changing the way people live (Nuccio & Guerzoni, 2019). Tax systems are an integral part of this change, and many countries are experiencing a steady movement towards the introduction of electronic technologies in the daily interaction of tax authorities and taxpayers.

Digital technologies are attractive to government agencies for many reasons. For example, they can provide the tax authorities with a more detailed picture of the taxpayer's

The 13th International Days of Statistics and Economics, Prague, September 5-7, 2019

status and thus help reduce the tax gap. Also, they assist in reducing the administrative burden on the tax authority and, if implemented properly, on the taxpayers as well. In addition, such innovations not only improve efficiency, but also transform the existing taxes and the taxation as a whole: for example, pre-filling of tax returns for citizens, practiced in the countries of the European Union, fundamentally changes the situation with tax compliance, moving toward a paradigm in which the government automatically prepares the tax returns, and the citizens are responsible for their audit. Obviously, such tax returns disregard tax planning and may not always apply the most tax-optimal regime in relation to individual citizens, but facilitate the individual submission of tax returns.

Despite the fact that digitalization of a number of procedures can provide a significant reduction in the cost of tax administration, there are certain optimal approaches to the process of implementing digital innovations that should be taken into account, as well as common mistakes that should be kept in mind. For instance, testing through pilot studies and step-by-step implementation of new software will reduce the complexity of the transition to digital administration. On the other hand, if the mandatory transition to new digital methods happens too fast, it will result in additional costs for taxpayers.

Apart from practical aspects, implementation of new technologies leads to changes in the concept of taxing, in particular, collection of the value added tax (VAT). The existing theoretical models were developed in the age of printing regardless of fundamentally new phenomena such as electronic services, electronic payments, virtual data, and so on. The format of business processes is changing so rapidly that once developed theoretical models become inevitably obsolete even before their full-scale practical testing. In the circumstances, public authorities find it quite difficult to develop regulatory documents, and the theorists of economic science consider the interpretation of the digital revolution as a complicated task. However, classifying the general theoretical and practical issues as more specific and considering issues in terms of only one object will contribute to the promotion of theoretical knowledge in the sphere of taxation.

The methodology of the paper: analysis of documents and articles, modeling "Smart VAT". The aim of the paper is to present the characteristics of the new type of VAT. Research questions: Digitization of VAT against the background of digitization of taxation; problems of VAT digitalization; prospects for digital VAT. Used data: OECD, PwC, ICAEW reports; articles by leading researchers.

658

1. Review of existing studies

The digitalization processes and, in particular, the digitalization of the economy are considered in domestic and foreign sources both in the scientific and business environment. From the theoretical point, an attempt is made to identify the solid foundation of the IT revolution, while the business circles are in search of the most profitable areas for the implementation of digital solutions.

The English research works introduced the notable report by the Institute of Chartered Accountants of England and Wales "Digitalization of tax: international perspectives", considering the objectives, opportunities, challenges of digitization, and also presenting an overview of the experience of Russia and other countries. Christina Trent, professor of the Tax Law department at the University of Örebro (Sweden), explored the European VAT in the era of digitalization, and her work is interesting in terms of examining the European experience in introducing new technologies (Broussolle, 2016). An international research group issued a guide to VAT of electronic services, which describes the useful experience of digitalization of VAT in the EU (Bird Advokat KB, 2014). Also, of some interest is the research conducted by the major consulting companies (PwC, 2016) and experts from the OECD (OECD, 2016).

The Russian sources provide quite informative reviews and reports of consulting companies (Grachev, 2016), tax experts, analysts of the analytical information portals (in particular, Garant and Consultant), as well as representatives of the research community. Both general and more specific aspects are considered. Thus, V.P. Vishnevsky and V. D. Chekina describe the fourth industrial revolution in terms of taxation and assess the prospects for the development of tax instruments in the new conditions (Vishnevsky V. P., 2018). S. I. Kniaziev considers digital technologies as a tool for the implementation of the state policy (Kniaziev, 2017). The experience of implementing new digital laws is analyzed in the business journals.

It can be generally concluded that the issues of digitalization are widely covered in both foreign and Russian sources, thus allowing for a more detailed consideration of the VAT transformation.

2. Digitization of VAT against the background of digitization of taxation The term "digitalization" has come into use relatively recently – at the turn of XX-XXI centuries, although the spread of digital technologies started a little earlier – in the 70-ies of the 20th century, with the development of computer technology (Kraus, Roig-Tierno, & Bouncken, 2019). In spite of the IT nuance in the perception, the term has little to do with the computer sphere and is used to describe the transformations of all spheres of public life (digitalization of business, digitalization of education, digitalization of the economy, etc.) (Nesleha, Hampl, & Svoboda, 2018). An interesting fact is that among theorists and practitioners there is an obvious unity in the interpretation of the concept (Tab. 1).

Author	Definition	
Theorists		
T. N. Butseva (Buceva, 2012)	The transition from the traditional form of communication, recording and data transmission to a digital one, implemented with the help of digital devices	
I. D. Afanasenko (Afanasenko, 2018)	The process of adopting a new form of data submission; the increase in the use of digital or computer technology at a single enterprise, in an industry or in the whole country	
Practices		
A. Tarasov	The process of changing the form of business in the digital reality based on data.	
K. Yang	Solving business problems with the help of digital technologies.	
N. Fefilova	The use of digital technologies to improve business efficiency, involving changes in business processes and even a complete change in the business model of the company.	

Source: the author study

The most simplified definition can be represented by a formula: digitalization = change, and with it there is a change both at the qualitative and quantitative levels. When considering digitalization of various objects, there are more detailed definitions that take into account the specific scope of implementation. It should be noted that digitalization is quite a flexible phenomenon, and in each new case the implementation of digital technologies adapts to the requirements of the participants in the process. If digitalization is a process, then the result is a digital form of something (Fig. 1).

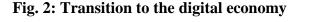
Fig. 1: Digitalization: from process to outcome

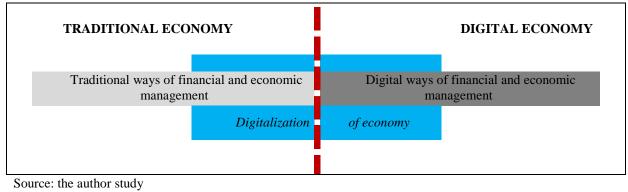
RPOCESS				OUTCOME			
Digitalization			Digital spac		space		
(many objects)			(many objects		jects)		
Digitalization of economy			Digital economy				
(one of the many objects)			(one of the many objects)				
	Digitalization of taxation			Digital t	axation		
	(one of the many subobjects)			(one of the many subo	objects)		
		Digitalization of VAT		Digital VAT			
		(one of the many		(one of the many			
		subsubobjects)	,	subsubobjects)			

Source: the author study

Digitalization of the economy is the process of introduction, testing and adjustment of digital technologies, and "digital economy" is an area in which the implemented technologies operate (at least

partially) (Fig. 2). Digitalization in the XXI century plays an equally important role for the economy as did mechanization in the mid 50-ies of the XX century (Faulhaber, 2019).





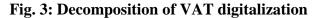
In Russia, digitalization at the legislative level was first introduced in 2017 by the national program "Digital economy". However, the elements of introduction of new technologies in the economy were observed long before the official announcement. In the framework of the program there emerged such orientation as "digital taxation", digital VAT in particular. This term is not official, but can be used, since VAT has been the leader among Russian taxes in terms of digitalization. This situation is due to the following reasons: VAT is the most significant fiscal tool in Russia; VAT digitalization affects a wide range of participants: taxpayers (individuals and legal entities), the state, and software developers; the digitalization contributes to reducing the extent of VAT evasion.

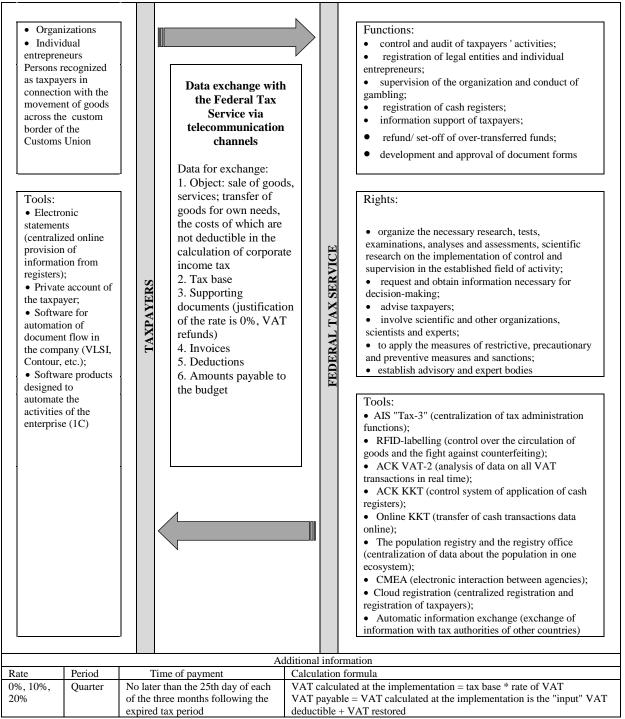
The main digital transformations in relation to VAT are:

1. Transition to remote interaction between taxpayers and tax authorities. The information exchange is carried out by means of specialized software and allows for almost complete cancellation of the printed form of documents.

2. Implementation of digital tools in the activities of both taxpayers and tax authorities (personal account of the taxpayer, VAT, etc.) (Fig. 3).

As is known, the basic document in the VAT sphere is the Tax Code of the Russian Federation (TC RF), but this document ignores many of the new circumstances in the economic sphere, which makes it outdated and largely irrelevant.





Source: the author study

Thus, despite the large-scale penetration of Internet technologies into the social life, the tax code lacked provisions regarding electronic services, and this was especially manifested as a loss of amounts of value added tax. In order to correct the current situation, a number of legislative amendments were made to the tax code. Thus, as of January 1, 2019, the place of sale of goods, works and services is the territory of the Russian Federation if the

The 13th International Days of Statistics and Economics, Prague, September 5-7, 2019

terms are complied with article 147 and article 148 of the Tax Code of the Russian Federation (TC RF).

In 2016, the TC RF introduced for foreign legal entities article 174.2, which regulates the peculiarities of interaction with the tax authorities of Russia, in particular, obliges foreign companies, operating in the territory of the Russian Federation, to register with the tax authority. It should also be noted that since 2017 the so-called "Google tax" has been in force, which regulates the mechanism of VAT payment by non-resident companies selling services in the territory of the Russian Federation. The first practical outcome of the introduced digital technologies is the growth of tax collection, i.e. a vivid manifestation of VAT fiscal function and an increase in the control – taxpayers are forced in many cases to improve the transparency of financial and economic activities (Alexeev, Avxentyev, Mamedov, & Sinelnikov-Murylev, 2019).

The peculiarity of VAT digitalization in Russia is the rejection of foreign software and cooperation only with national manufacturers. In addition to the mentioned administrative tools, the Federal Tax Code is planning to consolidate data from the profiles of social networks of taxpayers, to introduce mobile facilities, to carry out machine-to-machine data exchange, to carry out network analytics, as well as to receive electronic logs of companies ' operations. Such consolidation will assist in interacting with taxpayers through telecommunication channels, and also in automating the process of tax calculations, the process of tax payment, and in withdrawing the obligation to file tax returns. Thus, conditions will be created for the most comfortable activity of bona fide VAT payers and at the same time, the possibilities for the functioning of tax evasion schemes will be minimized.

3. Problems of VAT digitalization

Despite the large-scale and rapid digitalization of VAT, there are also a number of problems which often slow down the ongoing reforms. The following main obstacles arising at the stage of VAT digitalization can be distinguished (Tab. 2).

Problem	Characteristics of the problem	Possible solutions
Digital detachment	The most common problem is manifested either in the reluctance of users to move to a new format of interaction with the tax authority, or in the lack of stable access to channels of information and communication interaction (for example, the lack of the Internet in remote settlements of the northern	Introduction of liability for non- compliance with the new reporting format; organization of Internet access points in remote regions.

Tab. 2: The main problems of VAT digitalization

	regions of Russia).			
Cost and complexity	The introduction of new software is costly for both tax authorities and taxpayers. The number of specialists who are familiar with new programs is limited.	The costs of the tax authorities are compensated by increased collection of taxes, and avoidance of possible fines offsets the costs of taxpayers. Training seminars for employees should also be conducted.		
Security & privacy	Electronic communications are open to many potential abuses, and there is a human factor.	Implementation of multi-stage control over the activities of data operators; improvement of the protection of user's data.		
Data transition	Previous reporting is stored in hard copy or in unadapted format. There is a need for additional information.	Conversion of the most important documents into a new format.		
Legislative inconsistencies	The existing regulatory system was developed during the non-digital taxation period and disregards the current situations.	Adjustment of the existing legislation; development and adoption of new bills.		

Source: the author study

Thus, efficient digitalization of taxes, including VAT, is only possible in case of coordinated interaction of tax authorities, taxpayers and software designers. In addition, adequate legal support for digitization should be provided.

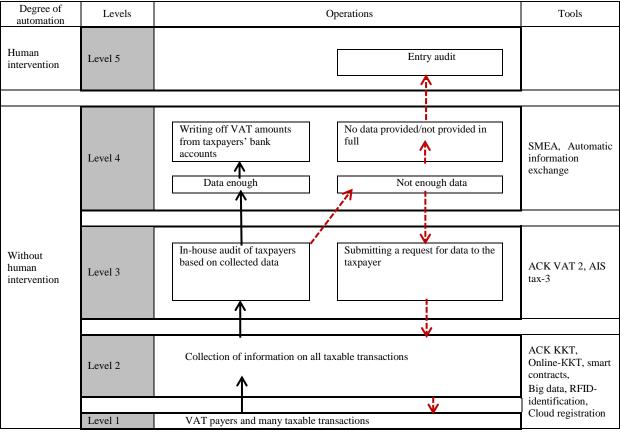
4. Prospects for digital VAT

Further development of digital technologies and improvement of the existing format of interaction between VAT payers and the Federal Tax Service should inevitably lead to the transition from traditional VAT to a new qualitative level – smart VAT. Smart VAT (smart-VAT) is a model of the future universal indirect tax, calculated and collected without human intervention. It is based on blockchain technology (Fig. 4). The first step in this direction has been made in 2018, with the introduction of online cash desks.

The new model will provide a level of automation that allows of online estimating and writing off tax amounts from the taxpayer's account. As a result, the need to submit tax returns will be cancelled, and the inspector's intervention is restricted to exceptional cases. It is important to note that the column "Tools" lists the currently known technological solutions in the field of VAT taxation, which in the future may be supplemented or replaced.

Then the requests for additional data are sent in regards to them. If the data cannot be provided or the data provided do not fully meet the requirements of the system, the information is sent to the tax inspector to make a further decision on the appointment of a field tax audit. If the information is complete and sufficient, VAT amounts are deducted from the taxpayer's bank account. During the transition from digital VAT to smart VAT, the automated generation of tax returns with the request of additional information from users is possible.





Source: the author study

Conclusion

Digitalization is a large-scale phenomenon, and hardly can a sphere that it would not touch be found. Its main symptom is the transition from the world of real and physically defined things to the world of intangible and electronic ones. Both theorists and practitioners are trying to assess the prospects of economic transformations. In the field of VAT taxation, digitalization was particularly evident: new laws and amendments to the tax code were issued, new software was introduced into the activities of the tax service, and taxpayers were granted new rights and obligations. Consequently, in the context of the crisis trends of 2014-2015, the VAT collection increased, and at the same time the percentage of tax evasion decreased.

This study described the present VAT, efficiently being digitized in Russia. To characterize tax, the decomposition of the digitalization of VAT was shown, which demonstrates a vast arsenal of digital tools belonging to the Federal Tax Service of Russia. This also shows that the format of cooperation of the tax authority and the taxpayer has moved to a digital environment. In addition, the problems of VAT digitalization were identified, the main of which is the reluctance or inability of taxpayers to join in the digital

environment. No less important are the problems of the cost of implementing new technologies, the complexity of their debugging and personnel training; the problem of protecting the transmitted information; the problem of legislative support for the VAT digitalization. With the coordinated work of government agencies, tax payers and software manufacturers, these problems can be efficiently resolved.

In the future, the human involvement in the control over the calculation and payment of tax will be minimized, since tax administration will be digitized.

Acknowledgment

The work was supported by the Russian Foundation for Basic Research, contract No 17-22-21001.

References

Afanasenko, I. (2018). Digital Logistics. St. Petersburg: Publishing House "Piter".

Alexeev, M., Avxentyev, N., Mamedov, A., & Sinelnikov-Murylev, S. (2019). Fiscal Decentralization, Budget Discipline, and Local Finance Reform in Russia's Regions. PUBLIC FINANCE REVIEW, 679-717. Retrieved from http://www.forbes.ru/kompanii/336337-nalog-na-google-chto- zhdetinostrannyeinternet-kompanii-v-2017-godu

Bird Advokat KB. (2014). Your pocket guide to VAT on digital e-commerce. Stockholm. Broussolle, D. (2016). A NOTE ON SERVICES IN THE EUROPEAN UNION

- REGULATIONS: IS DIGITAL CONTENT A SERVICE?, (pp. 55-75). Naples.
- Buceva, T. (2012). New words and meanings. Acta Linguistica Petropolitana.
- Faulhaber, G. (2019). The Internet Trap: How the Digital Economy Builds Monopolies and Undermines Democracy. JOURNAL OF ECONOMIC LITERATURE, 444-447.
- Gnatișina, E. (2017). Digitalization and digital culture formation: social and educational aspects. CPSU newspaper.
- Grachev, A. (2016). Digital economy: challenges to the tax system and the legislative. Retrieved from https://www.ranepa.ru/images/News/2016-12/29-12-2016-grachev.pdf

ICAEW THOUGHT LEADERSHIP . (2019). Digitalisation of tax: international perspectives.

- Kniaziev, S. (2017). Development of smart industry as an efficient way to implement the policy of neoindustrialization in the world. Economy industry, 7-10.
- Kraus, S., Roig-Tierno, N., & Bouncken, R. (2019).. REVIEW OF MANAGERIAL SCIENCE, 519-528.
- Nesleha, J., Hampl, F., & Svoboda, M. (2018). Industry 4.0 Aimed at Accounting System. EUROPEAN FINANCIAL SYSTEMS 2018: PROCEEDINGS OF THE 15TH INTERNATIONAL SCIENTIFIC CONFERENCE, 168-173.
- Nuccio, M., & Guerzoni, M. (2019). Big data: Hell or heaven? Digital platforms and market power in the data-driven economy. COMPETITION & CHANGE, 312-328.
- OECD. (2016). Co-operative Tax Compliance: Building Better Tax Control Frameworks. Retrieved from https://doi.org/10.1787/9789264253384-en
- PwC. (2016). Industry 4.0: Building the digital enterprise. Retrieved from https://www.pwc.com/gx/en/industries/industries-4.0/landing-

Vishnevsky V. P., C. V. (2018). Robot vs. tax inspector or how the fourth industrial revolution will change the tax system: a review of problems and solutions. Journal of Tax Reform, 6-26.

Contact

Olga Karpova Ural Federal University, 620002, 19 Mira street, Ekaterinburg, Russia olmkarpova@gmail.com Igor Mayburov Ural Federal University, 620002, 19 Mira street, Ekaterinburg, Russia mayburov.home@gmail.com