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Taxation of business income from the use of digital information and communication technologies

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***Abstract* — In this article, the subject of the study is the tax burden of organizations engaged in new activities using digital information and communication technologies. The purpose of the work is to determine the features of the crypto economy, which should be taken into account in the development of measures of tax regulation of organizations in the field of digital economy. It is established that the transformation of approaches to the exchange of information, allowing economic agents to make transactions on the basis of digital platforms that are not tied to the geographical borders of States, reduces the need for legal entities and individuals in the delegation of authority to the state as an institution of power. Systematized foreign practice of direct taxation of income of economic agents from the sale of cryptocurrencies, which allowed to identify promising areas of development of tax regulation in Russia. The analysis of the conceptual scenarios of taxation of crypto income is given and the conclusion is made about the expediency of deferred recognition of the object of taxation in the creation of cryptocurrency in order to reduce the tax risks of users.**

Keywords — blockchain; mining; virtual currency; cryptocurrency; bitcoin; crypto-business; taxation; digital economy; crypto-economy; information and communication technologies

I. Introduction

The objective reality of modern economic relations was the use of virtual instruments in the production of material products. The reason for this is a sharp drop in the cost of information and communication technologies (hereinafter — ICT) due to the creation and widespread use of digital (electronic) infrastructure that allows for mining through computer networks by solving complex mathematical problems.

Digital platforms radically change the principles of interaction of economic agents: the economy built on the Foundation of trust between the Contracting parties, which is the basic principle observed by economic agents at the conclusion of any agreement, is transformed into an economy that does not need such trust due to the use of registers — forms of systematization of data accounting, protected from manipulation by unauthorized persons In 2008. there is a new approach to information storage, which formed the basis of the blockchain: information is stored simultaneously on a large number of equivalent computers, United in a single system, and any changes in information are recorded on each computer. Forgery of information is possible, but it costs a lot of money; the cost of forgery is several orders of magnitude higher than the expected effect. The positive aspects of this transformation are the provision of open access to information, protection against loss of information as a result of its distribution to different computers, leveling corruption, fraud, exclusion of conditions for obtaining administrative rent.

Thus, digitalization has affected the economy in the following way: interaction of economic agents has ceased to require their mutual trust, as there has been a transformation of approaches to access, storage and protection of information.

II. Transformation Of Relations Between Economic Agents And The State

For many centuries, citizens have voluntarily relinquished some of their rights transferred to the state in exchange for paying taxes. They are driven by the belief that the state is more successful than they themselves will cope with the implementation of a number of functions, including the creation of channels of information exchange, the development of standards of measures and weights (including the organization of monetary circulation, as money is a universal measure of exchange). With the advent of digital platforms, the need to delegate such powers to the state disappears, especially when you consider that cryptocurrencies have no nationality, are diverse and short-lived. Members of the community — owners of this currency do not need to replicate cryptocurrency. Acquiring an asset in the hope of its growth, cryptocurrency owners do not benefit from the fact that someone else will acquire the same cryptocurrency and log in, even if it is done on their recommendation. As a result, the effectiveness of state regulation of cryptocurrency issue can be questioned. Therefore, there are no and cannot be institutional conditions for linking (identifying) the blockchain platform to the borders of a particular state.

Currently, due to the availability of digital infrastructure, economic agents have the opportunity to carry out real economic activities involving private currencies issued, as a rule, on the basis of cryptography methods and not having the status of a legal means of payment in any state.

Cryptocurrency becomes a highly profitable asset. Any non-professional investor can increase his investments several times, because cryptocurrency is distinguished by such qualities as manufacturability (ease of management); democratic entry to the market (valuable for beginners and for those who do not have large financial resources); the presence of different - shaped income strategies (flexibility); the ability to create a completely passive income; no reference to a specific territory. These circumstances in the eyes of the community favorably distinguish investments in cryptocurrency from Bank Deposit and other classical financial instruments, the management of which requires competencies, experience or relationships.

As a result, buying and selling cryptocurrencies allow economic agents to multiply invested capital and create a source of passive income in a short time.

Thus, as the risks of effective government regulation of the cryptocurrency market can be identified:

1. the lack of binding of the blockchain platform to the geographical borders of a particular state;

2. the lack of economic agents need to delegate part of their powers to the state as an institution of power;

3. the presence of these risks complicates the taxation of operations carried out with cryptocurrency.

Most transactions in the crypto-economy are carried out through bitcoin (hereinafter — bitcoin, PTS)7, and the larger the community, the greater the need for crypto - currency. However, the number of BTC is mathematically limited. Its rate is growing according to the laws of supply and demand, so no one will guarantee the growth of the BTC rate. The same can be said about any cryptocurrency. And if we conduct a comparative analysis of the leaders among cryptocurrencies, we can say that during 2013-2016 years. BTC maintained its leadership position, while the rest of the crypto-currencies changed places or disappeared before they could appear (table 1).

TABLE I. CHANGES IN THE RATE OF THE BLOCKCHAIN-CRYPTOPLASM DEPENDING ON THEIR PROFITABILITY

Years	1-e place	2-e place	3-e place	4-e place	5-e place
2013	*Bitcoin*	*Litecoin*	*Ripple*	*Namecoin*	*Peercoin*
2014	*Bitcoin*	*Litecoin*	*BitShares*	*Ripple*	*Nxt*
2015	*Bitcoin*	*Ripple*	*Litecoin*	*Dash*	*Dogecoin*
2016	*Bitcoin*	*Etherium*	*Ripple*	*Litecoin*	*Etherium Classic*

Note that the problem of cryptocurrency security in the tax context does not play a role, as well as in the case of Fiat currency. But the geographical boundaries of the tax base are not clearly defined, which carries the risk of its erosion.

III. Tax Regulation Of Cryptocurrency Transactions In Scientific Publications

For the first time interest in the problem of taxation of transactions in the digital economy arose in 1998 in connection with the publication of the report "Aggressive tax competition: an aspect gaining momentum globally," although it dealt with the challenges of the digital economy rather than the taxation of income from the activities of organizations involving the use of cryptocurrency [2]. Publications on this topic usually note the complexity of building tax relations, due to the predominance of intangible assets over tangible assets, high mobility of assets, their users, business functions [3], the influence of the digital economy on the placement of value chains [4], the presence of international tax competition [5]. Some scientists propose to draw up a roadmap for the deoffshorization of the Russian economy, providing for a paragraph on cryptocurrencies, which proposes to instruct the Bank of Russia to develop defining aspects of the development of mechanisms and tools of the digital economy and a plan of possible actions of the international community to implement them in practice [6].

At the international level, the issue of taxation of transactions using crypto-currencies was raised in the speech of the head of the delegation of Brazil when considering the draft OECD report on the tax challenges of the digital economy in October 2017 [7].

The leader in government initiatives to regulate the digital economy belongs, of course, to international organizations, primarily the OECD, which published the final report on the tax challenges of the digital economy [8] (work on the report was carried out by a Working group established in September 2013, which published in April 2014 a draft of public discussions, and in September 2014— the final report), as well as the European Commission, which in 2015 adopted a strategy for the transition of Europe to a single digital market [9].

Among the 15 activities of the OECD action plan to counter the erosion of the tax base and the withdrawal of profits (BEPS), the first item is "Activity 1. Responding to the challenges of the digital economy" (Action Address the tax challenges of the digital economy). The objectives of activity 1 are to identify the main difficulties in the application of the current rules of international taxation of companies operating in the digital sector, as well as to develop detailed solutions to emerging problems, taking into account the overall global approach and the order of direct and indirect taxation. The action plan includes an analysis of the following issues:

- "digital" presence in the country without creating a taxable presence;
- attribution of the value created by the transfer of information to users through the sale/provision of digital products and services;
- qualification and determination of the source of income in new business models;
- provision of VAT/tax levies on trade activities and services in relation to the activities of international companies operating in the digital sector.

However, the taxation of crypto-currencies was not at that time the center of attention of international organizations.

It should also be noted the initiatives of individual States in the development of approaches to tax regulation of organizations in the digital economy.

In France, for example, a government report on the taxation of the digital economy (known as the Collin report) was published in 2013 [10].

Based on the supranational nature of the cryptocurrency, it can be assumed that there is some jurisdiction with a reasonably low tax burden, within which a number of taxes cannot be levied — at least with respect to the production of new cryptocurrency units. The anonymity of users makes cryptocurrencies an analogue of offshore companies, and despite the fundamentally different nature (cryptocurrencies are popular because of low transaction costs, tax evasion is not a factor in their development — offshore is in demand only as tax havens), the risks of erosion of the tax base due to cryptocurrency are even higher due to the fact that they do not depend on financial intermediaries — banks, interaction with which today allows tax authorities to obtain information about the movement of capital [11].

Therefore, often in different countries, the first initiatives of introducing cryptocurrencies into the legal field were put forward in the context of tax regulation and tax administration before the official recognition of the status by the authorities. In the Russian Federation, insufficient attention was paid to measures aimed at countering tax minimization due to insufficiently developed rules of taxation in the digital economy at that time. In the US, the issue of taxation of payment systems was brought up for discussion in 2007, and in 2013. The U.S. court of accounts (GAO) recommended that taxpayers be informed of the need to pay bitcoin tax [12]. In Japan, since April 2017, the cryptocurrency has been recognized as a means of payment.

Gradually, the scientific community comes to the conclusion that crypto entrepreneurship is a type of activity that brings income and is subject to taxation.

IV. Conceptual Approaches To Taxation Of Income From Activities With Cryptocurrencies

In tax theory, it is generally accepted that the process of generating income should be subject to direct taxes. While there is a tendency in developed countries to reach an agreed opinion on indirect taxation, namely VAT exemption, there is no such unity on direct taxation. Nevertheless, the following approaches can be generalized (table. 2):

- the fact of issue and receipt of cryptocurrency can be recognized as the fact of receipt of taxable income at fair market value regardless of sale (USA, Spain, Japan, Israel), followed by capital gains taxation;
- establishing a non-taxable minimum for "personal use" activities (e.g. Sweden, France, Australia);
- recognition of capital gains as taxable only in the exchange of crypto currency for Fiat money and the establishment of benefits in the case of long-term investment or a small volume of operations (Germany, Singapore, Brazil).

It is important to note that the financial authorities have not formed a unified position on the taxation of cryptocurrencies in countries where it is most advantageous, according to Bloomberg, to engage in mining taking into account such factors as the cost of electricity, ease of doing business, the availability of renewable resources, the average speed of the Internet and the average annual air temperature (Canada, China, Switzerland, Russia). We believe that the current initiatives of the Russian government to regulate the crypto - currency market will ensure compliance with the fundamental principles of taxation and will contribute to the progress in the field of ICT.

TABLE II. APPROACHES OF DIFFERENT COUNTRIES TO TAXATION OF INCOME, INCLUDING INCOME FROM ACTIVITIES WITH CRYPTOCURRENCY

Mode	**Country**	**Characterization of approaches**
Benefit for "personal use»	France	The income (if output and capital gains) are taxable
	Sweden	in General, except in cases of personal use (Ministry of economy and Finance, 2017)
	Australia	Income from hobby-related products is not taxed (i.e. less than 25 bitcoins per year for personal use)
Exemption on capital gains in case of implementatio n long-term investment or small volume	Germany	Income on sale (capital gains) is taxed at the rate of 25% on sale, but is applied
	Singapore	exemption if there is more than a year between purchase and sale
	Brazil	Profit on sale from long-term investment (capital gains) is not taxed.
Full taxation of mining income and capital gains	Spain	The income at issue is taxable, the Ministry of Finance, 2015
	USA	Income (at issue and capital gains) is taxed in the General order at the time of receipt of the cryptocurrency (Internal revenue service, 2014)
	Japan	Income on sale (capital gains) is taxed in the General order
	Israel	Income on sale (capital gains) is taxed in the General order at the rate of 25%
Is not the position	Britain	"Taking into account individual facts and circumstances»
	Canada	Income (at issue and capital gains) is taxed on a case-by - case basis (revenue Agency, 2014)
	Switzerland	There is no direct indication
	China	There is no direct indication
	Russia	Income is taxed as in foreign exchange transactions (FTS, 2016).

In our opinion, in the conditions of the modern economy, activities related to cryptocurrencies need preferential treatment, for example, in the release of operations performed in a small amount not exceeding a certain threshold. The arguments in favor of preferential taxation of mining are, firstly, activities related to cryptocurrencies based on promising blockchain technology, secondly, reducing the costs of tax administration, and thirdly, increasing international tax competition due to the fact that abroad there are proposals to mitigate the approach to the taxation of cryptocurrencies.

Activities related to cryptocurrencies include their creation, storage, payment for goods and services and exchange for Fiat currencies. The most controversial problem is the problem of direct taxation of income in mining - the qualification of this operation depends on the qualification of other operations for tax purposes. Regardless of the status of mining for tax purposes, the legislator may impose a tax on the storage of cryptocurrency. Such an innovation, for example, is introduced in the US in 2018 to cool the overheated market.

The main question in the decentralized issue of crypto currency by the user arises about the moment of occurrence of the object of taxation: immediate immediately upon creation or deferred during the subsequent exchange or payment for goods and services.

Let's consider mining qualifications in more detail.

1. Extraction of precious metal. The closest, at first glance, is the analogy with the extraction of precious metals, if only because the conceptual apparatus of crypto-Economics originates from the mining industry, and the number of units of crypto-currency is mathematically limited. Gold mining in Russia can not be carried out by individuals (free enterprise is not legalized because of the risks of criminalization of the sphere), similarly, in a recent bill, the Ministry of Finance of Russia proposed to allow mining only to individual entrepreneurs and legal entities. In this scenario, the taxation of mining should follow the logic adopted in the taxation of mineral extraction (hereinafter — met): the object of taxation appears in the extraction of minerals and is subject to met, if there is the fact of production; in addition, there is a need for licensing activities. Despite the obvious similarities, the cryptocurrency system is not tied to the borders of the territory of the Russian Federation and is not its property, unlike the state subsoil. Thus, the logic of resource taxes does not apply to cryptocurrencies. In addition, it is not possible to control the place and time of actual income generation. The analogy with the precious metal can be useful from the point of view of VAT, as in relation to the investment of the precious metal benefit is applied [14].

2. Receiving compensation as a reward for work or services — the creation of new units of crypto-currency [15]. In such a scenario, income for tax purposes should also be recognized immediately as non-operating income in kind if the user registers business activity, or as income of an individual in kind. At the same time, due to the decentralization of the system, the tax agent is excluded from the traditional elements of the tax, and insurance premiums are not charged. The recognition of monetary income as a result of mining is less likely due to the impossibility of granting official status to a foreign currency. Depending on the status of the cryptocurrency, payment in kind may be equivalent to payment in goods, work, services, securities or coupons.

Note that in accordance with the principle of determining income enshrined in article 41 of the Tax code of the Russian Federation (hereinafter — the tax code), income is recognized as an economic benefit in cash or in kind, taken into account if it is possible to assess it and to the extent that such benefit can be assessed. The wording of this article of the tax code refers to the principle of certainty: if the benefit cannot be estimated, it is not taken into account as income. While the regulation will not ensure transparency in cryptocurrency systems for tax authorities, assessment of revenue impossible.

The script can be applied if simultaneously with this approach will be introduced, the threshold of the "safe Harbor" for miners, the mining of a currency unit for personal purposes, i.e. in small quantities, by analogy with the practice adopted in Sweden, Australia and France, or if the exceptions to the General principle of recognition of income will be introduced deferred taxation in respect of financial assets.

3. The creation of a digital product similar to computer programs, audiovisual works, etc. In this scenario, at the time of creation of a currency unit, the user does not have an object of taxation, and its recognition is postponed until the implementation of the cryptocurrency. This scenario seems optimal.

If the qualification of cryptocurrencies in the acquisition and sale operations is synchronized with the qualification in the operations of their creation, a scenario of deferred income recognition is possible, which would reduce the tax risks of users.

V. Conclusion

1. We are witnessing the beginning of a profound transformation of the interaction between the state and economic agents, caused by the merger of the real and virtual worlds, resulting in a crypto-economy, built on the lack of trust between agents, due to changes in approaches to access, storage and protection of information.

2. The state is interested in regulating the crypto-economy due to the fact that the crypto-market generates income that can become an object of taxation and bring tax revenues to the budget.

3. The emergence of crypto currency requires a revision of such functions of the state as the creation of channels of information exchange and the development of standards of measures and weights, including the organization of monetary circulation of relations. This circumstance radically changes the attitude to taxes in their classical understanding of the price for services provided by the state due to the lack of binding the blockchain platform to the geographical boundaries of a particular state and the lack of the need for economic agents to delegate part of their powers to the state as an institution of power.

4. Countries have succeeded in forming approaches to state regulation of the digital economy, but the development of the Institute of regulation of the cryptocurrency market is at an early stage.

5. The Bank of Russia has ranked cryptocurrency as a monetary surrogate, the issue of which is legally prohibited. The Ministry of Finance has developed a draft law laying the

foundations for state regulation of investments in digital financial assets.

6. Conceptual approaches to the taxation of income from activities with cryptocurrency between the countries are not agreed. We believe that activities related to cryptocurrencies (primarily mining) need preferential treatment.

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