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Taxation of individuals holding cryptocurrencies in Europe

Comparative analysis of Germany, France and Italy

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Abstract

Modern technologies change economic relations in society and gradually transform the legislative framework. Blockchain-based cryptocurrencies are probably one of the most striking examples. Although they increase in value and are widely accepted as means of payment by major corporations, many EU member states are just starting to implement solutions to regulate their use, including in terms of taxation. At the same time, the EU fails to introduce a unified approach to the taxation of cryptocurrency transactions in its common economic area. Accordingly, the question arises as to whether the unified approach is justified, given the example of individual member states.

The analysis of German, French, and Italian legislation showed that each state has a different approach to understanding the essence of cryptocurrencies. For example, Germany and France rely on the definition of "virtual currency" set forth in EU Directive 2015/849. However, while Germany uses the "cryptoassets" term, France uses the more general "digital assets" concept. In turn, Italy hasn't enshrined yet any clear definition of cryptocurrencies in its legislation. This may lead to contradictions when considering international cases in the EU.

Differences in understanding the essence of cryptocurrencies inevitably lead to differences in taxation approaches. On the one hand, Germany, France, and Italy recognise the validity of ECJ judgment in case C-264/14, exempting cryptocurrency transactions from VAT. On the other hand, while in Germany the profit from cryptocurrency trading is included in total personal income, thus, changing the progressive tax rate, this option is not possible for occasional transactions in France and is wholly excluded in Italy. Moreover, French law provides tax exemption for crypto-to-crypto exchange transactions. In Italy, this approach is accepted in practice, although not covered by the law. In turn, in Germany, taxes are levied on any transactions, which complicates the process of calculating the tax and creates uncertainty in specific issues, such as staking.

Differences in the taxation of cryptocurrency transactions pose a question of the possibility of legal harmonisation, which is justified due to the underdevelopment of the principles of taxation of cryptocurrency transactions at the level of individual EU members. However, as a more correct solution, it is proposed to take measures to harmonise legislation based on directives, as this will allow avoiding an adverse impact on the fiscal sovereignty of the EU members.

List of abbreviations

1. AML – anti-money laundering
2. ANC – Autorite des Normes Comptables (French Accounting Standards Authority)
3. BaFin – Bundesanstalt für Finanzdienstleistungsaufsicht (Federal Financial Supervisor Authority)
4. BNC – bénéfices non commerciaux (non-business income)
5. CFT – counter-financing of terrorism.
6. DLT – distributed ledger technology
7. ECJ – European Court of Justice.
8. EStG – Einkommensteuergesetz (German Income Tax Act)
9. EU – European Union
10. GDP – gross domestic product
11. ICO – initial coin offering
12. KWG – Kreditwesengesetz (German Banking Act)
13. MFC – Monetary and Financial Code
14. MiCA – Markets in Crypto-Assets
15. PACTE – The Plan d'Action pour la Croissance et la Transformation des Entreprises (Action Plan for Business Growth and Transformation)
16. SME – small and medium-sized enterprise
17. TEU – Treaty on European Union.
18. TUIR – Testo unico delle imposte sui redditi (Italian Consolidated Law on Income Tax)
19. UStG – Umsatzsteuergesetz (German Value-added Tax Act)
20. VAT – value-added tax

1 Research subject, problem and objectives

1.1 Subject of the research

Technological progress is a key factor in economic development giving rise to new phenomena in the life of modern society. Blockchain, i.e. a distributed database or a public ledger of all transactions or digital events used by participating parties is a spectacular example. [1]

Blockchain has become widespread in practice. In particular, the technology is applicable in financial instruments, public and private records, access keys to tangible assets (house, car, etc.), various intangible assets and other areas. [2]At the same time, the business has found a range of areas for the use of blockchain in its operations, including in digital personal identity, trusted data-sharing, grant financing, intercompany accounting, supply chain management, customer engagement and creator monetization. [3]

However, the blockchain was originally created as the basis for Bitcoin, making cryptocurrencies the best-known application of technology in practice. [4]It is about "the tokens or the currency which are being used in the blockchain networks to send value and as a payment for the transactions in the system."[5] At the same time, cryptocurrencies are in the category of investable digital assets, that is, they can only exist in digital form. [6]

We must say that cryptocurrencies have a wide range of advantages. In particular, they minimize transaction costs and ensuring direct control of assets by the user due to the absence of intermediaries. In addition, one should take into account the possibility of confidential and transparent payments, a high degree of asset protection based on cryptography and decentralization of storage, as well as flexibility of cryptocurrencies as a software product. [7]

1.2 Problem of the research

Cryptocurrencies have become quite widespread in practice, since in 2021 more than 300 million people or about 3.9% of the total world population used them. In addition, more than 18 thousand organizations began to

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[1] Michael Crosby, Nachiappan, Pradhan Pattanayak, Sanjeev Verma, Vignesh Kalyanaraman, 'Blockchain technology: beyond Bitcoin', [2016] 2 Applied Innovation Review 6

[2] Melanie Swan, *Blockchain: blueprint for a new economy* (O'Reilly Media 2015)

[3] Deloitte, 'Tech trends 2022' [2022] <https://www2.deloitte.com/content/dam/insights/articles/US164706_Tech-trends-2022/DI_Tech-trends-2022.pdf> accessed 4 May 2022

[4] Akira Summers, *Understanding blockchain and cryptocurrencies: a primer for implementing and developing blockchain projects* (CRC Press 2022)

[5] Vanita Jain, Arun Kumar Dubey and Anurag Choubey, 'Plasma chain and blockchain security model' in Bharat S Rawal and others (eds), *Implementing and leveraging blockchain programming* (Springer Nature 2022) 80

[6] Jason Scharfman, *Cryptocurrency compliance and operations: digital assets, blockchain and DeFi* (Palgrave Macmillan 2022)

[7] Summers (n 4)

accept cryptocurrencies as a means of payment, including AT&T, Burger King, Coca-Cola, KFC, Microsoft and PayPal. [8]

One of the factors that ensured popularization of cryptocurrencies among individuals was availability of obtaining speculative income. It is known that the growth in the value of cryptocurrencies is largely due to their market exchange and an increase in quotations. [9]For example, the price of Bitcoin as the most popular and well-known cryptocurrency increased approximately 400 times for 2013-2021, from $100 to $40 thousand. [10]

If we talk about capitalization of the entire global cryptocurrency market, then over the past seven years it has grown by about three orders of magnitude, exceeding the mark of $2 trillion. [11]This result was provided by the growth of quotation rates, the emergence of new cryptocurrencies, as well as their decentralized issue, i.e. mining operations.

The popularization of cryptocurrencies, acting as an alternative to traditional fiat money, caused an ambiguous response from the individual countries. For example, in nine countries, including China, a complete outright ban on the circulation of cryptocurrencies was introduced. In addition, 42 countries are implementing implicit ban measures related to the restriction of operations of financial institutions in this area, termination of the activities of cryptocurrency exchanges in the country and other decisions of this kind. [12]

However, in most cases, the state is trying to implement measures aimed at regulating relations between participants in the cryptocurrency market, including their taxation. No exception is European countries whose population actively uses the services of some cryptocurrency exchanges, including Kraken, Bithumb and Bitfinex. [13]According to some estimates, in 2020, taxes only on Bitcoin transactions in the EU could generate revenue in the amount of about €850 million. [14]

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[8] TripleA, 'Cryptocurrency across the world', [2022] <https://triple-a. io/crypto-ownership/> accessed 25 April 2022

[9] Chainanalysis, 'The 2020 geography of cryptocurrency report' [2020] <https://redeeem-cdn. sfo2.digitaloceanspaces.com/public/2020_chainalysis_geography_of_crypto_report. pdf> accessed 15 April 2022

[10] Coinmarketcap, 'Bitcoin to USD chart' [2022] <https://coinmarketcap.com/currencies/bitcoin/> accessed 15 April 2022

[11] Coinmarketcap, 'Global cryptocurrency charts' [2022] <https://coinmarketcap.com/charts/> accessed 15 April 2022

[12] Law Library, 'Regulation of cryptocurrency around the World: November 2021 update' [2021] <https://tile.loc.gov/storage-services/service/ll/llglrd/2021687419/2021687419.pdf> accessed 16 April 2022

[13] IMF, 'Global financial stability report October 2021' [2021] <https://www.imf.org/en/Publications/GFSR/Issues/2021/10/12/global-financial-stability-report-october-2021> accessed 16 April 2022

[14] Andreas Thiemann, 'Cryptocurrencies: an empirical view from a tax perspective', [2021] 12/2021 *JRC Working Papers on Taxation and Structural Reforms*

The problem is that the EU countries have not developed a unified approach to taxation of cryptocurrencies. [15]The analysis of individual states evidences that their approaches differ both in the principles of market regulation and in the very understanding of what cryptocurrencies are. [16]This circumstance leads to the question of whether individual EU states as representatives of a single economic space should introduce a unified system of cryptocurrencies taxation.

1.3 Objectives of the research

Taking into account the above context, several interrelated tasks are set before the research, namely:

1. Determining the features and differences in understanding the essence of cryptocurrencies in individual EU states.
2. Finding out the key principles of cryptocurrencies taxation in EU states, taking into account the specifics of understanding their essence.
3. Assuming whether a unified approach should be implemented in cryptocurrencies taxation in the EU states.

2 Methodology of the research

2.1 Delimitations of the research

The European Union includes 27 states that differ significantly from each other in economic and political weight. For example, in terms of the GDP, five largest EU countries form more than 69% of the gross economic result, although we are talking only about 19% of the total list of member states. [17]It follows that the analysis of the cryptocurrency regulation principles in each individual country of the European Union is both time-consuming and irrelevant due to the existence of regional centres of economic power.

For this reason, the study focuses on three key EU states, namely Germany, France and Italy. The listed countries form about 55% of the economic result of the entire union in terms of GDP[18], and also represent 54% of the total number of cryptocurrency users in the EU. [19]It is assumed that these countries have a significant impact on the EU legislative field, and their developments in regulation and taxation of cryptocurrencies can act as an example for other Union members.

It should also be noted that the analysis of the taxation system is focused on individuals, as they act as the main users of cryptocurrencies. For example,

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[15] Antonios Broumas, 'Impact of the MiCA proposal on the taxation of crypto-assets within the EU' [2021] International Tax Review <https://www. internationaltaxreview.com/article/ b1v26088yfnd4t/impact-of-the-mica-proposal-on-the-taxation-of-crypto-assets-within-the-eu> accessed 16 April 2022

[16] Law Library (n 12)

[17] The World Bank, 'GDP (current US$)' [2022] <https://data.worldbank.org/indicator/ NY.GDP.MKTP.CD> accessed 16 April 2022

[18] Ibid

[19] TripleA (n 8)

the total number of cryptocurrency users in Germany, France and Italy is estimated at about 5.7 million people. [20]

2.2 Methods and materials used

The fundamental method of research is comparative law, "whose object is the comparison of legal systems with a view to obtaining knowledge". [21]At the same time, the comparison can occur at various levels, ranging from the consideration of individual legal families (macro-comparison) and ending with the comparison of specific legal topics in individual countries (micro-comparison). As a rule, it is the latter option that is typical for comparative law studies,[22] that is, usually attention is paid to the features of national legal systems. [23]Not an exception is the ongoing research which focuses on comparing the principles of cryptocurrencies taxation in three separate countries.

We should note that a comparative law can pursue various goals. In particular, it can act as an instrument of learning and knowledge or an instrument of evolutionary and taxonomic science. In addition, one should take into account pragmatic and utilitarian aims of comparative law associated with the improvement of a certain law system or law harmonization. [24]For example, at the end of the twentieth century, legal scholars saw comparative law as a key instrument for harmonizing the legal environment in the EU. [25]This circumstance emphasizes the importance of using comparative law as part of the research which considers the problem of unification of the tax legislation in the European Union countries in relation to cryptocurrencies.

One should note that comparative law contains several basic methods, some of which were applied in the research. In particular, it is about a functional method that looks for functional equivalents of solving legal problems and issues in individual legal systems, pushing specific rules and procedures for achieving these decisions to the background. [26]As part of the research, this method was applied at the stage of studying the terminology of individual legislative systems to reveal the essence of cryptocurrencies in the understanding of individual EU states.

An analytical method was also applied, which allows for an in-depth study of the concepts and constructions underlying individual legal systems to compare their meaning rather than the formal meaning of words. In this regard, it was also necessary to use the law-in-context method inextricably

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[20] Ibid

[21] George Mousourakis, *Comparative law and legal traditions: historical and contemporary perspectives* (Springer Nature Switzerland 2019) 1

[22] Mathias Siems, *Comparative law* (2nd edn, Cambridge University Press 2018)

[23] Mark van Hoecke, 'Methodology of comparative legal research', [2015] Law and Method 1

[24] H. Patrick Glenn, 'Aims of comparative law' in Jan M. Smiths (ed), *Elgar encyclopedia of comparative law* (Edward Elgar Publishing 2006) 57-65

[25] Hoecke (n 23)

[26] Ibid

linked with the analytical method and allowing us to consider the legal system operation in practice. [27]Both presented methods of comparative law were necessary at the stage of studying the key principles of cryptocurrencies taxation in individual countries.

At the same time, legal-dogmatic or doctrinal approach played a large role in the research, which "aims to give a systematic exposition of the principles, rules and concepts governing a particular legal filed". [28]In fact, we are talking about the theoretical study of legal doctrine to find a specific statement of the law and reveal its logic. [29]For example, as part of the ongoing research, it was necessary to disclose the essence of cryptocurrencies based on the definitions prescribed in national laws. For this reason, a study based on the legal-dogmatic approach may be called library-based[30] or black letter law research. [31]

The materials that served as the basis for the study were mainly legislative acts of EU states. Basically, they served as a source of information for the legal-dogmatic approach, as well as the functional method of comparative law.

Academic papers are also used in the work, which provide some general idea of the problems of cryptocurrencies taxation in modern economic conditions. In some cases, court cases indicating local difficulties of cryptocurrencies taxation in the EU were considered. These materials were mainly required at the stage of using the analytical and law-in-context method of comparative law.

3 Perception of cryptocurrencies in EU states

3.1 Germany

According to the data for 2021, 2.19 million cryptocurrency users lived in Germany, which is about 2.62% of the total population of the country. This means that the state is in twentieth place in terms of absolute indicator in the world. Nevertheless, the penetration of cryptocurrencies in Germany remains at a fairly low level – according to this parameter, it occupies only the 34th position in the global list. [32]

It should be noted that there is no specific regulatory framework for cryptocurrencies in Germany. Instead, the general financial regulatory regime is applied, which includes AML, banking, capital markets, financial

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[27] Ibid

[28] Jan M. Smiths, 'What is legal doctrine? On the aims and methods of legal-dogmatic research' in Rob van Gestel and others (eds), *Rethinking legal scholarship: a transatlantic dialogue* (Cambridge University Press 2017) 207-228

[29] Salim Ibrahim Ali, Zaryati Mohamed Yusoff and Zainal Amin Ayub, 'Legal research of doctrinal and non-doctrinal', [2017] International Journal of Trend in Research and Development 493

[30] ibid

[31] Smiths (n 25)

[32] TripleA (n 8)

services and other laws. [33]One should also take into account that the literal term “cryptocurrency” is not represented in the legislative framework of the country. Instead, the term “cryptoassets” (“Kryptowerte”) is used assigned to one of the types of financial instruments in accordance with section 1(11) sentence 1 No. 10 of the KWG. [34]

According to BaFin, in English, the term “cryptoassets” can be defined as follows: “a digital representation of value which has neither been issued nor guaranteed by a central bank or public body; it does not have the legal status of currency or money but, on the basis of an agreement or actual practice, is accepted by natural or legal persons as a means of exchange or payment or serves investment purposes; it can be transferred, stored and traded by electronic means”[35] (according to the section 1(11) sentence 4 of the KWG[36]).

Notably, the term “cryptoassets” represents “a catch-all provision”[37], that is, a wide definition that includes all possible forms of cryptocurrencies, even if they have already been taken into account among the list of financial instruments within the KWG. [38]At the same time, BaFin recognizes that the concept used is based on the definition of the term “virtual money” presented in Art. 3 No. 18 of EU Directive 2015/849[39] (according to amendments).

Thus, we can conclude that within the framework of German law, the concept of cryptocurrencies is enclosed in the term “cryptoassets”. At the same time, this category is not considered as legal tender and is classified as financial instruments.

3.2 France

The number of cryptocurrency users living in France is only slightly behind Germany's figures at 2.18 million, according to 2021 data. However, the French are more inclined to use digital assets, so the penetration of cryptocurrencies in the country reaches 3.34% of the total population. Thus, France is on the 21st place in the world both in absolute and specific indicators. [40]

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[33] Matthias Berberich, Tobias Wohlfarth and Gerrit Tönningsen, ‘Germany’ in Michael S Sackheim and Nathan A Howell (eds), *The virtual currency regulation review* (4th edn, Law Business Research 2021) 112-132

[34] German Banking Act (Kreditwesengesetz, KWG)

[35] BaFin, ' Guidance notice – guidelines concerning the statutory definition of crypto custody business (section 1 (1a) sentence 2 no. 6 of the German Banking Act (Kreditwesengesetz – KWG)’ [2020] <https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Merkblatt/mb_200302_kryptoverwahrgeschaeft_en.html > accessed 6 April 2022

[36] KWG

[37] BaFin (n 35)

[38] Berberich and others (n 33)

[39] Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing [2015] OJ L147/73

[40] TripleA (n 8)

In order to adapt to the latest market trends, the French state has decided to create a complete legal framework for the regulation of cryptocurrencies and related issues (ICOs, tokens etc.) This task was realized within the framework of plan for growth and transformation of enterprises, i. e. PACTE Act. On its basis, a wide range of measures aimed at ensuring the growth of SMEs in France was proposed and implemented. [41]

The entry into force of the PACTE Act led to a change in French legislation. In particular, the definition of digital assets (actifs numériques) [42] was introduced in the MFC. This category includes tokens (i.e. intangible digital assets incorporating rights) and "any digital representation of value that is not issued or guaranteed by a central bank or a public authority, is not necessarily attached to a legally established currency and does not possess a legal status of currency or money, but is accepted by natural or legal persons as a means of exchange and that can be transferred, stored and traded electronically". [43] In fact, this definition covers the concept of cryptocurrency. [44]

WE can conclude that French law does not consider cryptocurrencies as legal tender. Moreover, according to the Bank of France, the term "cryptocurrency" is misleading and should be replaced by the concept of "cryptoassets", since we are not talking about currencies as such. [45] However, this version of the name is not represented in legislative acts.

3.3 Italy

Indicators of the use of cryptocurrencies in Italy in 2021 are noticeably behind the two countries considered earlier. Thus, the total number of users in the country is estimated at 1.31 million people, which corresponds to the 28th place. In turn, the penetration of cryptocurrencies among Italians is 2.17%, which puts the country on the 49th place in the overall list of states. [46]

It is possible that the rather low penetration rates of cryptocurrencies among the Italian population were one of the reasons why the country does not have a complete legal framework to regulate this phenomenon. In particular, Italian banking, investment and securities laws do not contain a clear definition of cryptocurrency and synonymous concepts. [47] However, we

[41] Hubert de Vauplane and Victor Charpiat, 'France' in Michael S Sackheim and Nathan A Howell (eds), *The virtual currency regulation review* (4th edn, Law Business Research 2021) 96-111
[42] French Monetary and Financial Code (code monétaire et financier)
[43] Vauplane and Charpiat (n 41) 101
[44] Ibid
[45] Banque de France, 'L'émergence du bitcoin et autres crypto-actifs: enjeux, risques et perspectives', [2018] Focus <https://publications.banque-france.fr/sites/default/files/medias/documents/focus-16_2018_03_05_fr.pdf> accessed 6 April 2022
[46] TripleA (n 8)
[47] Raffaele Lener and others, 'Italy' in Michael S Sackheim and Nathan A Howell (eds), *The virtual currency regulation review* (4th edn, Law Business Research 2021) 154-167

should note that at the end of 2018, formulations of such concepts as DLT and smart contract were given. [48]

3.4 Comparison

Analysis of the situation shows that Germany and France use similar definitions of cryptocurrencies in their legislation, based on the interpretations presented in the EU Directive 2015/849. Accordingly, in both countries, cryptocurrencies are considered as a digital representation of value, which does not have a centralized issue and is not a legal tender, but is accepted by individuals and legal entities as a means of exchange. In turn, Italy has not yet implemented any steps to define cryptocurrencies in legislative acts.

However, we should note that the specific terms used in Germany and France differ from each other. Thus, German law uses the concept of 'cryptoassets' while French law does not operate with a separate term for cryptocurrencies, but refers their definition to the group of digital assets. At the same time, within the framework of the EU Directive 2015/849, which served as a source for the legislation of the two countries, the concept of 'virtual currency' is used.

4 Principles of cryptocurrencies taxation in EU states

4.1 Germany

There is no specific regulatory framework for cryptocurrencies in Germany, therefore, they are subject to taxation according to general tax laws. [49] Accordingly, two main tax types are affected, namely VAT and income tax.

In the case of VAT, the ECJ decision of 2015 interpreting Council Directive 2006/112/EC [50] plays an important role. According to ECJ judgment, operations of cryptocurrency exchange for traditional currencies and vice versa act as a service for a fee and therefore must be exempted from VAT.[51] The German Federal Ministry of Finance supported this position.[52] In his opinion, the exchange of Bitcoin and other virtual currencies is not subject to VAT on a par with the sales and brokerage of sales of legal tender in accordance with §4 No.8 letter b of UStG.[53]

The same applies to the use of computing power to create new blocks, that is, mining. Despite the fact that a miner receives transactions fees, as well as reward for his work (for example, completion of the next block), it is an uncontrolled process where you cannot identify a specific recipient of the

[48] Decreto-legge 14 dicembre 2018, n. 135
[49] Berberich and others (n 36)
[50] Council Directive 2006/112/EC on the common system of value added tax [2006] OJ L347/1 (VAT Directive)
[51] Case C-264/14 *Skatteverket v David Hedqvist* [2015] ECR I-498
[52] German Federal Ministry of Finance, letter of 27 February 2018, III C 3 – S 7160-b/13/10001
[53] German Value-added Tax Act (Umsatzsteuergesetz, UStG)

service. In this regard, there are no grounds for collecting VAT.[54] However, in the case of the income tax collection, this interpretation remains controversial.

We should say that back in 2013, the Parliamentary State Secretary of the Federal Ministry of Finance noted that the use of cryptocurrencies as a means of payment does not imply the qualification of such transactions under tax laws. However, this does not apply to cases related to obtaining profit from such transactions.[55] Accordingly, although transactions with cryptocurrencies are exempt from VAT, they shall be subject to income tax.

For a long time Germany had no single point of view on the principles of taxation of income from the sale of cryptocurrencies.[56] Only in June 2021, the German Federal Ministry of Finance released a draft circular[57] reflecting the ministry's position on income tax treatment of cryptocurrencies.[58] In this document, cryptocurrencies are classified as “private assets” (“Privatvermögen”), whereas its sale involves the receipt of other income in accordance with §22 and §23 of EStG[59].

Therefore, income from transactions with cryptocurrencies is subject to taxation taking into account several rules. First of all, if an individual owned cryptocurrencies for more than a year, the income from their sale is not taxed. In addition, if the term of ownership of private assets did not exceed a year, but the income received is less than 600 euro, taxes are also not charged.[60] Accordingly, in all other cases, income from transactions with cryptocurrencies will be taxed at a progressive rate, depending on the individual income amount.[61] This approach creates favourable conditions for long-term holders of cryptocurrencies who are not interested in receiving speculative income from short-term transactions.

However, taxation of income from the sale of cryptocurrencies in Germany still raises certain questions due to gaps in the legislative framework and active development of a new market. For example, it remains unclear how taxes on crypto rental income or yield betting are charged, i.e. “the process by which people contribute a pre-determined amount of a specific

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[54] German Federal Ministry of Finance (n 55)

[55] Hartmut Koschyk, ‘Statement of Parliamentary State Secretary of the Federal Ministry of Finance’, [2013] 17/14062 Deutscher Bundestag 25

[56] PwC, ‘PwC annual global crypto tax report 2021’, [2021] <https://www.pwc.com/gx/en/insights/pwc-annual-global-crypto-tax-report-2021.pdf> accessed 08 May 2022

[57] Berberich and others (n 36)

[58] German Federal Ministry of Finance, ‘VAT treatment and discussion of income tax treatment of crypto tokens’ [2020] <https://www.bundestag.de/resource/blob/704904/16d8ee9f5216e150cb012b65906cd0c7/WD-4-054-20-pdf-data.pdf> accessed 08 May 2022

[59] German Income Tax Act (Einkommensteuergesetz, EStG).

[60] Ibid

[61] PwC, ‘Germany; Individual – taxes on personal income’, [2022] <https://taxsummaries.pwc.com/germany/individual/taxes-on-personal-income> accessed 08 May 2022

cryptocurrency for a reward"[62] (similar to interest on a bank savings account). It is also unclear exactly how to declare profits and losses from the sale of cryptocurrencies.[63]

Special attention in draft circular is paid to the taxation of mining operations, although they are not widespread in Germany due to the high cost of electricity (second place after Denmark in the first half of 2021[64]). On the one hand, the acquisition of cryptocurrency through privately operated, occasional mining can be considered as possibly taxable income.[65] On the other hand, there is no certainty that mining is a service due to the specifics of its execution mechanism (timing and coincidence as success factors; serving a network rather than a specific individual).[66] Moreover, it still remains unclear whether mining should be considered as a private or commercial activity.[67]

In general, we can conclude that for the taxation of cryptocurrencies, Germany relies on general tax laws, such as EStG and UStG. However, the lack of measures to adapt legislative acts to new realities leads to disputes. As a result, uncertainty remains regarding specific issues, such as gain/loss declaration, taxation of betting, taxation of private mining operations, etc.

4.2 France

Establishment of a complete legal framework for the regulation of cryptocurrencies in France required to significantly revise the legislative and regulatory framework, up to accounting principles.[68] In particular, the changes affected taxation, namely VAT and individual income tax.

Thus, VAT regulation in France is based on the ECJ resolution, according to which the exchange of cryptocurrencies for traditional currencies or other cryptoassets should be excluded from value-added taxation.[69] However, one should bear in mind that this tax is relevant in the case of exchanging cryptocurrencies for goods or services.[70]

In the case of income tax, we should note that until 2019, France was one of the least attractive jurisdictions for cryptocurrency users in the EU, as individual investors had to pay up to 60% of the profits received.[71] For comparison, the income tax rate in Germany does not exceed 45%.[72]

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[62] Scharfman (n 6) 149
[63] PwC (n 59)
[64] Eurostat, 'Electricity price statistics', [2022] <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity_price_statistics> accessed 10 May 2022
[65] German Federal Ministry of Finance (n 61)
[66] Walther Pielke, *Besteuerung von Kryptowährungen: Ein Überblick über die verschiedenen Steuerarten* (Springer Gabler 2018)
[67] German Federal Ministry of Finance (n 61)
[68] ANC Regulation No. 2018-07 of 10 December 2018
[69] *Hedqvist* (n 54)
[70] PwC (n 59)
[71] Vauplane and Charpiat (n 44)
[72] PwC (n 64)

However, in 2019, an article was added to the General Tax Code of France specifying the rules for taxation of digital assets (Article 150 VH bis). It defines that crypto-to-crypto exchange is not subject to taxation, and capital gains in the amount of no more than 305 Euros for the reporting year are exempt from taxes.[73] Accordingly, tax collection is postponed until the cryptocurrency is sold for legal tender or used to purchase goods and services, which simplifies tax accounting and reporting. However, this fact does not exempt an individual from tracking transactions to justify the final profit or loss.[74]

The income tax rate was from lowered to flat tax rate of 30%, which includes 12.8% of income tax and 17.2% of social levies.[75] However, this option applies only to persons engaged in occasional sales of digital assets.[76] If we are talking about professional regular activities, then income from cryptocurrency transactions shall be taken into account together with other income of an individual and taxed at a progressive rate from 0% to 45%, excluding social levies of up to 17.2%.[77] Accordingly, the problem is the differentiation of cases of occasional and regular cryptocurrencies sale, which is effected base on case-by-case analysis.[78]

Concerning mining operations, they do not fall under the specific regulatory regime in France.[79] As in many other EU countries, mining is not a common activity due to high electricity prices. Therefore, for individuals living in France, mining often remains a hobby or a side job.[80] In this regard, mining operations are classified as non-commercial or non-business income (bénéfices non commerciaux or BNC).[81]

In general, we can conclude that establishment of a complete legal framework in France made it possible to specify the key issues on taxation of individual income from sales of cryptocurrency. However, there still a problem of separating occasional and regular cases of cryptocurrency exchange due to the lack of clear boundaries. This fact may introduce certain subjectivity into the decisions taken by the tax authorities.

4.3 Italy

Italy does not have a fully formalized legal framework for regulating cryptocurrencies, so the country does not use specific legislation for the taxation of related transactions. Nevertheless, there are specific decisions of

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[73] Code général des impôts (French General Tax Code)
[74] Vauplane and Charpiat (n 44)
[75] PwC (n 59)
[76] Vauplane and Charpiat (n 44)
[77] PwC, 'France; Individual – taxes on personal income', [2022] <https://taxsummaries.pwc.com/france/individual/taxes-on-personal-income> accessed 08 May 2022
[78] PwC (n 59)
[79] Global Legal Insights, 'Blockchain & cryptocurrency laws and regulations 2022 – France" [2022] <https://www.globallegalinsights.com/practice-areas/blockchain-laws-and-regulations/France> accessed 10 May 2022
[80] Vauplane and Charpiat (n 44)
[81] PwC (n 59)

the Italian tax authorities that give some idea of the approach being implemented.[82]

So, as part of the resolution of September 26, 2018, the Italian Revenue Agency (Agenzia delle Entrate) gave some explanations in response to a request from a commercial organization. In particular, relying on the Council Directive 2006/112/EC [83]and ECJ decision in case C-264/14, it [84]was noted that cryptocurrencies can be classified as foreign currencies, and transactions with them are exempt from VAT.[85]

Accordingly, income tax on transactions with cryptocurrencies in Italy is determined according to the same rules as for capital gains from the sale of foreign currency. According to Article 67, paragraph 1-ter of TUIR, the tax can be levied only if the total value of cryptoassets owned by an individual investor exceeded 100 million old lira or 51,645.69 Euros for at least seven consecutive business days during a calendar year. If this condition is met, relevant capital gains are taxed at a flat rate of 26%[86]. Therefore, income from the sale of cryptocurrencies does not affect the taxable individual income amount, where a progressive scale of taxation is applied.[87] Such conditions make Italy one of the most attractive EU jurisdictions for trading cryptocurrencies.[88]

However, there are many gaps in Italian legislation posing uncertainty for the cryptocurrency market participants. For example, there is no specific regulatory regime for mining operations in Italy. At the same time, the particular nature of this activity does not allow to associate it with existing regulation in the country. In addition, it remains unclear whether crypto-to-crypto transactions are fiscally relevant, since Italian legislation does not taken into account this issue.[89]

4.4 Comparison

An analysis of the cryptocurrencies taxation in individual EU states allows us to draw certain conclusions regarding the key differences between the existing approaches. Thus, in the VAT context, we can conclude that German, French and Italian legislation unanimously relies on ECJ judgment in case C-264/14 [90] and its interpretation of Directive 2006/112/EC[91]. As a result, cryptocurrency transactions are exempt from VAT in all three countries. At the same time, Germany and Italy consider the reasons for

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[82] Ibid

[83] VAT Directive

[84]*Hedqvist* (n 54)

[85] Agenzia delle Entrate, Resolution 72/E/2016

[86] Italian Consolidated Law on Income Tax (Testo unico delle imposte sui redditi, TUIR)

[87] PwC, 'Italy; Individual – taxes on personal income', [2022] <https://taxsummaries.pwc.com/italy/individual/taxes-on-personal-income> accessed 08 May 2022

[88] Lener and others (n 50)

[89] Ibid

[90]*Hedqvist* (n 54)

[91] VAT Directive

such an exception in a similar way, since in the first case, transactions with cryptocurrencies are equated to the sales and brokerage of sales of legal tender, and in the second case, they are considered as exchange of foreign currency.

However, in the case of income tax, we can see a significant difference between the legislation of Germany, France and Italy. So, in the case of Germany, the sale of cryptocurrencies is taken into account together with all individual incomes, which has a direct impact on the final progressive tax rate. Thus, the results of the individual investor's activities lead to a complete revision of its tax burden. In France, this option is possible only if cryptocurrency trading was recognized as a professional activity of an individual. In turn, Italian legislation in principle does not take into account the results of cryptocurrencies trading when calculating aggregate individual incomes and determining the progressive tax rate.

Another important circumstance is that to date, German laws do not specify whether there are options for transactions with cryptocurrencies that should not be subject to income tax. For this reason, crypto-to-crypto exchange is fiscally relevant in Germany, which poses difficulties both in terms of accounting and taxation of specific issues such as staking. For comparison, in France, income taxation is postponed until the cryptocurrency is sold for a legal tender or used to purchase goods and services, which eliminates difficulties with assessing the financial result regardless of its form (remuneration in the form of interest, capital gains as a result of asset sales, etc.). It is assumed that such an approach is relevant for Italy, although this issue is settled at the legislative level.

Of course, taxation in individual countries also differs in more specific parameters, such as the rate, possible limit on non-taxable income, required terms of asset ownership, etc. This, in turn, creates different conditions for trading cryptocurrencies, making some states more attractive to individual investors compared to others. So, among the three countries considered, Italy offers the most attractive conditions, where tax collection is possible only with a high value of the asset portfolio, and the rate turns out to be the lowest.

We should also note that the similarity between the legislation of Germany, France and Italy lies in the absence of specific regulations for the taxation of mining operations. We can assume that the lack of state attention to this issue is due to low popularity of mining among EU residents due to a high cost of electricity.

In general, we can conclude that there is a certain difference between the cryptocurrencies taxation systems in Germany, France and Italy. At the same time, we can see unresolved issues in each individual country, causing uncertainty for individual investors.

5 Implementation of a unified taxation of cryptocurrencies in EU

Socio-cultural diversity underlies the differences that can be found when comparing legislative norms of individual states and regions. However, globalization provides increasing independence among national economies[92], which inevitably leads to interconnectedness of their legal systems.[93] As a consequence, there is a need for harmonization and unification of law.

As a rule, the term "unification" is considered in an international context.[94] For example, it can be presented as "a process of developing a set of international standards to serve as a model for the national laws so that all such transactions that have international dimension may be uniformly regulated".[95] In fact, it is about the strictest form of harmonization[96], when national legal systems are replaced by a unified system [97]instead of their approximation and coordination by eliminating key differences.[98]

The EU is one of the clearest examples of legal unification and harmonization by supranational law, i.e., regulations and directives.[99] At the same time, regulation "shall be binding in its entirety and directly applicable in all Member States" while directive "shall be binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods".[100] Based on these interpretations, directive can be considered as a harmonization tool, while directly applicable regulation is a unification tool.[101]

There are many examples of unification and harmonization of law in the world practice, but not all of them turned out to be successful.[102] Accordingly, each individual case requires a detailed discussion of the reasons why unification or harmonization are justified. The same applies to the issue related to the taxation of cryptocurrencies in EU states.

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[92] Michael A Hitt, R Duane Ireland and Robert E Hoskisson, *Strategic management: competitiveness & globalization* (12th edn, Cengage Learning 2017)

[93] Mousourakis (n 24)

[94] Hein Kötz, 'Unification and harmonization of laws' in Rudolf F Bindschedler and others (eds) *Encyclopedia of public international law vol. 10: states, responsibility of states, international law and municipal law* (Elsevier Science 1987) 513-519

[95] Ajendra Srivastava, *Modern law of international trade: comparative export trade and international harmonization* (Springer Nature 2020) 27

[96] Ibid

[97] Walter J Kamba, 'Comparative law: a theoretical framework', [1974] 23 International and comparative law quarterly 485

[98] George A Zaphiriou, 'Harmonization of private rules between civil and common law jurisdictions', [1990] 38 American Journal of Comparative Law 71

[99] Martin Gebauer and Felix Berner, 'Unification and harmonization of laws' [2019] Oxford Public International Law <https://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e1123> accessed 10 May 2022

[100] Consolidated version of the Treaty on European Union [2012] OJ C326/1 (TEU)

[101] Gebauer and Berner (n 104)

[102] Ibid

As the analysis demonstrates, the legislation of individual members of the EU approaches the problem of regulating cryptocurrencies in different ways. In particular, although this concept has become widespread among the world population, individual countries can use their own terminology. For example, Germany uses the term "cryptoassets", while France uses the broader concept of "digital assets". At the same time, legal definition of cryptocurrencies in both states is based on EU Directive 2015/849, where the term "virtual currency" appears.[103] Accordingly, there is a problem in understanding how such terms relate to each other, which entails uncertainty in solving international legal cases.

We should also bear in mind that individual EU states treat transactions with cryptocurrencies differently. So, in Germany, they are put on a par with other types of activities that bring personal income, since they have an impact on the total financial result of an individual and progressive tax rate. In France, this option is possible only in relation to those taxpayers who trade cryptocurrencies on a regular basis. In turn, Italian legislation in principle does not allow such an approach to taxation of profits from cryptocurrency transactions. At the same time, if in Germany the object of taxation is the profit received from any types of transactions with cryptocurrencies, France and Italy exempt crypto-to-crypto exchange from taxes, thereby simplifying the trading accounting system.

Therefore, there is an unbalanced tax system at the regional level, which creates less favourable conditions for trading cryptocurrencies for residents of some EU states compared to others. Such an environment poses risks of discrimination against taxpayers in individual states, and can also lead to uneven cryptocurrency market development within the European Union. Based on this, we can conclude that the exclusion of critical differences in national tax systems is a reasonable measure. The question is whether this should lead to the creation of a unified system of cryptocurrencies taxation.

We can provide some arguments in favour of unification. Firstly, not all EU members have a well-developed legislative framework that allows them to regulate transactions with cryptocurrencies. In particular, only minor changes have occurred in the Italian legal system. In turn, in Germany, measures to tax cryptocurrencies are presented in the form of draft circular, still having many gaps. Moreover, even France which took measures to create a complete legal framework, still has uncertainty regarding some specific issues (mining regulation, the distinction between occasional and regular cryptocurrency sales). The reason is that cryptocurrency trading is a completely new field of activity. As a result, full range of measures to adapt the legislation of individual countries to new market realities is not implemented, which limits the possibilities for harmonization of legal systems. In such circumstances, the creation of international legislative

[103] AML-CFT Directive

standards serving as a model for individual EU states becomes a justified solution.

Secondly, the existing principles of cryptocurrency regulation in individual European Union countries are more or less based on supranational laws. In particular, some countries use the definition of "virtual money" given in EU Directive 2015/849. [104] In addition, the example of Germany, France and Italy shows that the interpretation of Council Directive 2006/112/EC[105] on the part of the ECJ, serves as a justification for excluding transactions with cryptocurrencies from VAT taxation.[106] That is, the legal framework of individual countries is based on those EU acts that could serve as a centralized model.

However, some circumstances do not allow us to talk about the complete unification of the cryptocurrencies taxation systems in individual EU states. In particular, France was able to reach the final stages of developing a specific legal framework and integrating it into the existing system of laws. It follows from this that a number of states do not need a centralized legislative model. In addition, we should take into account that the issues of cryptocurrencies taxation are closely interrelated with the national fiscal policy and general principles of taxation of individuals in a particular country. This means that the absolute exclusion of differences between the legal systems of individual countries in terms of taxation of cryptocurrencies is not possible, as this will negatively affect the fiscal sovereignty of EU members.

In general, we can conclude that the elimination of critical differences between the principles of cryptocurrencies taxation in individual EU states is a reasonable measure aimed at creating equal conditions for the participation of the European population in the new market development. However, full unification in this case may harm fiscal sovereignty of EU members, so harmonization based on directives is a more acceptable option.

6 Summary and conclusions

According to the research results, we completed several interrelated tasks. In particular, we determined the features and differences in understanding the essence of cryptocurrencies in individual EU states. For example, Germany and France rely on the definition of "virtual currency" in the framework of EU Directive 2015/849. This act is about a digital representation of value which does not have the legal status of money, but is accepted as a means of exchange or payment.[107] However, one should take into account that each individual country uses its own term for

[104] AML-CFT Directive
[105] VAT Directive
[106] *Hedqvist* (n 54)
[107] AML-CFT Directive

cryptocurrencies, which can pose difficulties in correlating them in international cases.

We also considered the key principles of taxation of cryptocurrencies in EU states as part of the research. As a result, we concluded that there is a certain difference between the approaches of Germany, France and Italy. Although each of the three countries recognizes validity of ECJ judgment in case C-264/14 [108]regarding the exclusion of cryptocurrency transactions from VAT, there are different principles of income taxation. For example, Germany takes into account the results of cryptocurrency trading in aggregate personal incomes, which entails a change in progressive tax rate. In France, such an approach is possible only if an individual effects transactions with cryptocurrencies on an ongoing basis. In turn, Italy, in principle, refuses such an option, using a flat tax rate, as in the case of capital gains from foreign exchange.

Another important circumstance is that in Germany, any transactions with cryptocurrencies are subject to taxation, which complicates the accounting of transactions and creates uncertainty in specific issues such as staking. In turn, in France, crypto-to-crypto exchange is exempt from income tax, which solves the above problems. It is assumed that such an approach is used in Italy as well, although this issue is settled at the legislative level.

The final task of the research concerned the discussion of whether a unified approach should be implemented in taxation of cryptocurrencies in the EU states. The differences between cryptocurrencies taxation systems in Germany, France and Italy is an example of the existence of an unbalanced tax system at the EU region level, which poses risks of discrimination of individuals in individual states and may cause uneven cryptocurrency market development in the territory of the European Union. Accordingly, the exclusion of critical differences in national tax systems a reasonable measure is in itself.

Two facts speak for the unification of the cryptocurrencies taxation systems, namely their displacement by common international standards based on EU regulations. Firstly, not all EU members have a well-developed legislative framework for regulating cryptocurrencies. Accordingly, they may be interested in using centralized acts. Secondly, the principles of cryptocurrency regulation in some countries are based on supranational laws today, i.e. EU and Council Directives.

However, some circumstances do not allow us to talk about the complete unification of the cryptocurrencies taxation systems in the EU. In particular, there are states that reached the final stages of establishing a specific legal framework for regulating cryptocurrencies, which eliminates the need for a centralized legislative model. In addition, cryptocurrencies taxation is directly related to the overall national fiscal policy. Accordingly, the

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[108]*Hedqvist* (n 54)

absolute exclusion of differences between the legal systems of individual countries is not possible, as this will negatively affect the fiscal sovereignty of EU members. Therefore, harmonization based on directives is a more acceptable option.

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