Freedom in the Digital Age

VAT challenges from data as currency and the platform economy

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Abstract

The 21st century has introduced new ways of carrying on e-commerce, with the platform economy blurring the lines on the person supplying services for VAT purposes, and with Bitcoin becoming honest money for the internet age.

Natural rights theory demonstrates the superiority of decisions by the impersonal market, while recognizing the importance of the law and morality. In both the theory of public choice and the theory of Austrian school of economics, the analysis revolves around the behavior of the individual actors. Public choice theory compares relevant institutional alternatives from a ”theory of government failure” perspective. In answering how to best govern the commons, the best solution is rarely the obvious ”state” or ”privatize” solutions, but rather, participant-driven solutions are often superior.

With money representing one side of every transaction, what role does the commons problem of deteriorating purchasing power in the current fiat monetary system play in the efforts to increase surveillance of Bitcoin transactions? This paper will show that the VAT Directive, with its recent additions, is sufficient in taxing e-commerce transactions, and that the underlying reasons to heavy-handedly increase transaction reporting leveraging the VAT Directive are dark.

Sammanfattning

2000-talet har introducerat nya sätt att bedriva e-handel, med plattformsekonomin som suddar ut gränserna för vilken person som tillhandahåller tjänster från ett mervärdesskatteperspektiv. Bitcoin har blivit pengar för internetåldern.

Naturrättsteorin visar överlägsenheten av beslut från den opersonliga marknaden, samtidigt som man inser vikten av lagen och moralen. I både ”public choice”-teorin och den österrikiska skolan kretsar analysen kring de enskilda aktörernas beteende. Public choice-teorin jämför relevanta institutionella alternativ ur ett perspektiv om statligt misslyckande. När man svarar på hur man bäst styr allmänningen är den bästa lösningen sällan de självklara ”statliga” eller ”privatiserande” lösningarna, utan snarare är de deltagardrivna lösningarna ofta överlägsna.

Pengar representerande en sida av varje transaktion, vilken roll spelar problemet med allmänningen över köpkraften i det nuvarande fiat-monetära systemet i ansträngningarna att öka övervakningen av Bitcoin-transaktioner? Den här uppsatsen kommer att visa att mervärdesskattedirektivet, med dess nya tillägg, är tillräckligt för att beskatta e-handelstransaktioner, och att de bakomliggande skälen till att kraftigt öka transaktionsrapporteringen med hjälp av mervärdesskattedirektivet är mörka.

This paper is dedicated to Elinor Ostrom, who encouraged me to always ask "why?" and to Ross Ulbricht, whose endurance of injustice as a political prisoner in serving a double life without parole plus 40 years' sentence in federal prison in the United States gave me a reason to do so. Free Ross!

Abbreviations

B2B	Business-to-Business
B2C	Business-to-Consumer
CJEU	Court of Justice of the European Union
CPR	Common-property Resource
ECJ	European Court of Justice
EU	European Union
EI	Electronic Interface
ESS	Electronically Supplied Service
GST	Goods and Services Tax
HST	Harmonized Sales Tax
IOSS	Import One Stop Shop
IP	Intellectual Property
MOSS	Mini One Stop Shop
OECD	Organization for Economic Co-operation and Development
OSS	One Stop Shop
PSP	Payment Service Provider
SVR	Single VAT Registration
TBE	Telecommunications, Broadcasting, and Electronic Services
TEU	Treaty of the European Union

TFEU	Treaty of the Functioning of the European Union
VAT	Value Added Tax

1. Introduction

1.1. Background

From among the freedom-loving anarcho-capitalists and crypto-anarchists, an unstoppable way of carrying on e-commerce arose through the darkness of the 2007-2009 Global Financial Crisis.[1] Bitcoin is an electronic data currency that was used by the truly open market of the now shuttered Silk Road, which was based on the libertarian non-aggression principle of allowing consenting people to voluntarily buy and sell what they chose, as long as no third party was harmed.[2] While the US Government was able to shut the e-commerce platform site and cage the young developer Ross Ulbricht after a sham court case,[3] governments have not been able to stop Bitcoin itself, which has slowly but surely shaken off the image of the use case for criminal activity.[4]

On the other end of the freedom-spectrum, there is an ongoing discussion at the European Commission in general, and its Value Added Tax Committee in particular, about how data and the platform economy should be treated from a Value Added Tax (VAT) perspective. The basis of the Data as Currency argument is that platforms such as search engines and social media platforms, which do not charge fees to their users, still obtain remuneration in the form of data they collect from their users, tangentially calling out cryptocurrency. From the perspective of the currently applicable European Union (EU) VAT Directive[5], these facts

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[1] Message from the genesis block of Bitcoin: ”The Times 03/Jan/2009 Chancellor on brink of second bailout for banks” bitcoinexplorer.org/block-height/0/ retrieved on May 4th, 2023.

[2] Ulbricht Freedom Trust, ”What was Silk Road?”, freeross.org/what-was-silk-road/, retrieved on May 4th, 2023.

[3] Ulbricht Freedom Trust, ”Ross Ulbricht Case Overview”, freeross.org/case-overview/, retrieved on May 4th, 2023.

[4] Parker Lewis, ”Bitcoin is Not for Criminals”, unchained.com/blog/bitcoin-is-not-for-criminals/, retrieved on May 4th, 2023.

[5] Article 2(1)(a) and (c) of Council Directive 2006/112/EC of 28 November 2006, read together with Article 14(1) and Article 24(1) thereof.

constitute barter transactions between the platform and the user.[6] However, since the supply of data is made by a non-taxable person, the transaction goes untaxed.

There is a wide-spread school of thought among some national tax authorities that the data users provide should be treated as currency. As an example, a leading search engine faced a VAT assessment in Germany, where the tax authorities based the assessment on the data as currency approach.[7] In 2018, the German tax authority reconsidered this approach, however, and after the simultaneous European Commission VAT Committee Working Paper 958, the discussion seemed to have fizzled down.[8]

The context of the discussion has evolved between 2018 and 2023 with new VAT developments in general. One such development is the new VAT rules referred to as the VAT e-commerce package, which became applicable on July 1, 2021 for cross-border B2C e-commerce activities within the EU and into the EU. The main objectives for the EU legislator has been to simplify VAT obligations for EU e-merchants and to stop abusive practices by non-EU e-merchants.[9]

The discussion of Data as Currency reappeared, however, as a consequence of the European Commission (EC) Annual report on taxation 2022, which notes three subgroups of technologies that are posing challenges to taxing authorities within the digital transition. These were first, a rapid rise of electronic multisided platforms and network effects. Second, digitalized enterprises that are characterized by the growing importance of investment in intangibles, especially intellectual property (IP) assets, increasing the ability of companies to structure

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[6] Judgment of the Court (Ninth Chamber) of 10 January 2019, *A Oy*, C-410/17, EU:C:2019:12, Value added tax (VAT) - Directive 2006/112/EC - Article 2(1)(1) and (c) - Article 14(1) - Article 24(1).

[7] WTS Global, ”VAT Update for the Digital Economy”, wts.com/global/hot-topics/vat-update-for-digital-economy/, retrieved on May 4th, 2023.

[8] European Commission, Value Added Tax Committee, Working Paper No 958, Publications office of the European Union, 2018.

[9] European Commission, ”VAT - One Stop Shop”, vat-one-stop-shop.ec.europa.eu/index_en/, retrieved on May 4th, 2023.

themselves to minimize their tax liabilities. The third subgroup consisted of crypto-assets, particularly cryptocurrencies.[10]

The report discussed the intermediary role multisided platforms play to two or more distinct user groups that provide each other with network benefits. Each group is identified to derive more value from being active on the platform the more users of the other group are active. It is therefore suggested that users contribute to value creation by providing their data to platforms in exchange for free access (as an example through data that the platform sells to advertisers). The value creation is noted to be monetized by the platform, leading to a need to value these intangible assets, interpreting the role of data and the activities of the user as part of the creation of value and how it should be taxed.[11]

The report also found that the lack of centralized control for crypto-assets, their hybrid characteristics, and the form and rapid evolution of the underlying technology present tax policy challenges including how to value and tax the assets and the value generated with related transactions.[12]

1.2. Purpose and Research Question

The bureaucracy of the EU has demonstrated its intent to tax Bitcoin, simply because it is Bitcoin, rather than being content with allowing the ordinary VAT framework to tax transactions involving Bitcoin based on their own facts and circumstances. The purpose of this research paper is to explain the currently applicable VAT law and to adapt it to the actual situation of data as currency.

This paper will analyze if the current VAT law, including the articles of the EU VAT Directive that are relevant for barter-transactions, case law on discount codes, as well as the recent amendments to the Directive related e-commerce, Vouchers, and VAT in the Digital Age, sufficiently addresses the use cases of data

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[10] European Commission, Directorate-General for Taxation and Customs Union, ”Annual report on taxation 2022: tax policies in the European Union” (pp. 101-102), Publications Office of the European Union, 2022, https://data.europa.eu/doi/10.2778/64681

[11] ibid

[12] ibid

as currency, and is able to tax the transactions. The research question can be granulized as defining taxability of data forming part or all of the consideration paid, and defining the taxable person in the transactions.

In order to determine the taxable person, or the person acting as such on behalf of another party, this paper will discuss the application of the law to newly emerging technologies. New blockchain technology enables new types of payment methods through cryptocurrencies, the perpetually surviving one being Bitcoin, while both centralized and decentralized digital service providers offer their services through platforms in exchange for the users' data, rather than charging for the use. As these situations raise the question of whether or not the users become taxable persons themselves by virtue of bartering their data[13], it is of importance to connect this question with the e-commerce platform rules[14], by which, if expanded, the platforms would be required to report the VAT due in place of that taxable person (in this case the user).

This paper will also aim to answer whether or not data, or the value of the data, in these situations in general should attract VAT, which is of particular interest for businesses in the digital marketplace and for regulators seeking clarity on the real world use cases of data. These examples all deal with the issue of taxable person or the person acting as such.

The answers to these questions will be useful especially for businesses on the cutting edge of the digital space that are politically targeted in the eagerness of politicians to expand the scope of VAT, and the scope of surveillance of transactions.

1.3. Delimitation

The Value Added Tax system in the EU is relevant at two levels, the EU level and the national level of each Member State. This research paper will delimit its focus

[13] WTS Global, "VAT Update for the Digital Economy", wts.com/global/hot-topics/vat-update-for-digital-economy/, retrieved on May 4th, 2023.

[14] European Commission, "VAT - One Stop Shop", vat-one-stop-shop.ec.europa.eu/index_en/, retrieved on May 4th, 2023.

to the EU level, with minor references to the national level only where beneficial for the flow of the analysis.

1.4. Method

Since this research paper will be delimited mainly to the EU level, and since the data as currency discussion is currently mainly conducted at the EU level, the chosen method for this research paper is the EU law method, although chapter 2 will explain why an expansion from this method is required.

1.5. Outline

This paper will be structured through several chapters. First, an introduction is given in this chapter, providing the context and importance of the subject to be studied.

In the second chapter, the legal context and background is given, explaining the legal formalism approach, and that this study will require a further approach more akin to law and economics in order to explain human action in creating and using data. The chapter also gives the context of VAT within EU Law.

Third, a chapter on the normative theory presents the natural rights theory of Fréderic Bastiat[15] and Murray Rothbard[16], and its further developments in public choice[17], New Institutionalism is covered in order to explain governance of the commons. These theories are covered in order to offer more understanding to the institutions arising around new types of money, which legal formalism is unable to explain.

Fourth, a chapter on digital money covers the theory of money and the digital developments therein, while also discussing the challenges the EU VAT system is facing with emerging digital technologies and analyzing the outcome of human action from the perspectives of New Institutionalism and public choice.

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[15] Frédéric Bastiat (2001), *The Law*. The Institute of Economic Affairs (1st ed. *La Loi*. Paris, 1850)

[16] Murray N. Rothbard (1982), *Ethics of Liberty*, Humanities Press, Atlantic Highlands, NJ.

[17] James M. Buchanan (1999), ”Politics without Romance: A Sketch of Positive Public Choice Theory and Its Normative Implications”, in The Collected Works of James M. Buchanan: The Logical Foundations of Constitutional Liberty. Indianapolis, IN, Liberty Fund.

Fifth, a chapter on EU VAT explains the foundation of EU VAT and its central concepts, introducing the reader to the different economic actors in a VAT system and their responsibilities. The fifth chapter also covers specific parts of the EU VAT Directive that have to do with the EU e-commerce VAT package, the rules on vouchers and discount codes, the VAT in the Digital Age proposals, including a discussion on the ”deemed supplier” concept, as well as new information reporting requirements. These VAT concepts are crucial foundations in order to answer the research questions of determining the taxability of transactions involving data and the taxable person in those transactions, especially from the perspective of the direction the VAT Directive is evolving.

The sixth chapter analyzes certain scenarios where data is used, so that the purpose of describing the VAT treatment of transactions involving data based on general VAT principles in the existing law, and of explaining the human action in creating institutions governing data are fulfilled.

Finally, the seventh chapter summarizes and concludes the paper.

2. Legal Context and Background

2.1. Introduction

The choice of legal method is of crucial importance in order to determine the VAT treatment of transactions involving data, and of the taxable person in that transaction. It is also of utmost importance that the method used in this paper is able to define what the data of concern in reality is, in order to explain how it should fit within the existing VAT law, or the direction in which the law is moving. Therefore, it is of highest importance that the method is fit for purpose both in offering a formal legal explanation, and a conceptual understanding of data.

According to Hilling and Ostas, legal formalism espouses that conceptual reasoning techniques can and should be used to find objectively correct answers to legal questions.[18] Legal formalists base their analysis from the starting point of identifying the foundational principles of the specific body of law, and further deducing the outcome of a particular case from that foundation. Positive legal formalism argues that answers to legal questions are found solely in legal materials such as statutes, regulations, and precedents, and that the law ought to be independent of both morality and of empirical matters. Hilling and Ostas explain that the empirical matters that positive legal formalists state to be irrelevant are for example trends in social policy, the power or wealth of the litigants, or any other referent external to legal texts. Law is seen as an autonomous set of rules and exceptions to rules driven solely from legal texts.

The law mainly examined in this paper is the EU VAT Directive and indirectly the national legislations implementing the VAT Directive. While the law of EU VAT is well-established, the empirical matter of different types of data is not fully explained solely on the basis of the legal texts, and therefore, legal formalism is

[18] Axel Hilling and Daniel T. Ostas (2017), *Corporate Taxation and Social Responsibility*, pp.73-75. Wolters Kluwer

not able on its own to explain the application of EU VAT to this situation. Rather, another method will need to be employed in order to explain the human action related to data, and the governing institutions thereof.

According to Rothbard, law can be established in one of three ways: either by following traditional custom; by obeying the arbitrary, ad-hoc will of those who rule the State apparatus; or by the use of man's reason in discovering the natural law.[19] The legal formalist position allows for little discovery using man's reason, but rather expects conformity to the rule of the legislation of the State apparatus, as arbitrary as it may be. Natural Law, on the other hand, does not require following customs of men or the State apparatus. For this reason, this paper is based on the principles of Natural Law, and the reasoning and discovery allowed therein through the schools of thought of public choice and new institutionalism, while also offering a strict interpretation of the VAT law as written. This way, an understanding is gained of the reality of data as currency, rather than attempting to explain this phenomenon through merely the interpretation of legal texts, which, although well-established in the area of VAT, do not fully explain the reality to sufficient specificity.

2.2. Background to EU VAT

The purpose of the Value Added Tax system is to tax consumption, with the main outcome of raising income for the state.[20] In the EU, the VAT is also instrumental in determining the fee Member States pay to the EU and its institutions. In a Value Added Tax system, each transaction is taxed at all steps of the supply chain as value is added to the good or service that is eventually sold to an end consumer that bears the final cost of the VAT. It is an indirect tax, which means that the burden of the tax is carried by the consumer, but is collected and remitted to the taxing authority by the supplier. The tax is levied on the incremental value each producer adds, to the good or service being supplied, at each stage of production. In the EU VAT system, the tax remitted to the tax authority by each producer is

[19] Murray N. Rothbard (1982), *Ethics of Liberty*, p. 17, Humanities Press, Atlantic Highlands, NJ.

[20] Eleonor Kristoffersson & Pernilla Rendahl (2020), *Textbook on EU VAT*, pp.17-20, 3rd ed. Iustus Förlag AB. Uppsala.

the tax on the output (VAT collected on sales), reduced by the tax on the input (VAT paid on purchases). For example, company A produces VAT-taxable software X, which it sells and collects output VAT on. In development of X, A purchases software Y from company B, which charges VAT on the sale of Y. Since software Y is used in development of X, A can recover the VAT paid on Y as input VAT from the tax authority since it fully relates to the taxable supply of software X.

In general, EU law consists of two main sources. The primary sources include the Treaties, while Directives, including the EU VAT Directive, fall under the scope of secondary sources. Competencies are shared between the EU institutions and the Member States to varying degrees.[21] The shared competence in the area of VAT is based on Article 4 of the Treaty of the Functioning of the European Union (TFEU). A shared competence means that the principles of loyalty, subsidiarity and proportionality apply, according to Articles 4-5 of the Treaty of the European Union (TEU) and Article 2 TFEU. Further, the degrees of harmonization vary in areas where competence is shared between the EU and its Member States. In the area of VAT, the Member States have limited opportunities to legislate compared to other areas where little or no harmonization exists. The grounds for harmonizing EU VAT is based on Article 113 TFEI, i.e. the establishment and functioning of the internal market, entailing the distortion of competition.

The VAT system in the EU is established at both the EU level and at the national level in the Member States. The EU VAT Directive is an example of a secondary source of EU law, which builds on the legislative powers given to the EU institutions in the Treaties (Article 288 TFEU). This means that the secondary sources are subordinate to the primary sources, and therefore any conflict between the sources will have the primary sources prevail. Regulations are directly applicable in the Member States, and need not be transferred or implemented into national law. Directives, however, are binding to the Member States as to the result that needs to be achieved, but gives the Member States a certain amount of

[21] Eleonor Kristoffersson & Pernilla Rendahl (2020), *Textbook on EU VAT*, 3rd ed. Iustus Förlag AB. Uppsala.

freedom to choose the means to accomplish the results, but since the VAT Directives are very detailed, there is fairly limited amount of freedom for the Member States to implement them by means of their choosing on the national level.

The history of VAT dates back to at least von Siemens and Adams in the 1910s.[22] Von Siemens was a proponent of the currently used method of VAT, while Adams compared the policy of taxes on added value with taxes on income through an additive method, which would have been an alternative business tax. The modern VAT was first introduced in France in the 1950s, and in the European Community through the adoption of the VAT Directive in April 1967. This VAT system replaced the existing turnover taxes in a harmonized way, in order to facilitate the free movement of goods, services, workers, and capital between Member States with the goal of creating an internal market.

2.3. Current status of VAT

Several countries outside of the EU use a VAT system, which is often known as a goods and services tax (GST), or a Harmonized Sales Tax (HST). The Organization for Economic Co-operation and Development (OECD) has categorized these as the European model and the New World model.[23] The New World model includes amongst others Canada, New Zealand, South Africa, and Australia. Further, the OECD has developed International VAT/GST Guidelines as a basis for common policies between both OECD countries and non-OECD countries to avoid double taxation and double non-taxation on transactions.[24] Due to the global adherence to these guidelines, the general ideas of this paper are more or less transferable to the other markets, although even small nuances in the implementations of VAT can have a significant impact on the outcome.

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[22] Eleonor Kristoffersson & Pernilla Rendahl (2020), *Textbook on EU VAT*, p.20, 3rd ed. Iustus Förlag AB. Uppsala.

[23] OECD (2017), International VAT/GST Guidelines, OECD Publishing, Paris, https://doi.org/10.1787/9789264271401-en/

[24] ibid

Through all these initiatives, and through a significant amount of case law, although very complex, the treatment of VAT to transactions is well-established. In the current digital age, however, value is created and assigned to a number of new types of property, blurring the lines on goods and services. The emergence of alternative payment methods from credit cards to fin-tech apps has also necessitated more specificity by the EU with regards to the VAT treatment of transactions. Clarity and harmonization has been achieved for example through the ”Voucher Directive” that was adopted by the EU.[25] The use of discount codes has also added complexity to the question of how to treat alternative payment methods from a VAT perspective, and is relevant to the use of data as currency.

While the legal dogmatic method is useful for the strict interpretation of the wording of the law, this paper will not solely rely on that method since it can not explain the empirical reality of data and the use of it as currency. In many cases, the most frequently used economic theories and models are also unable to explain the new types of property in a fundamental way. This paper will therefore need to investigate the digital reality from a first principles basis starting with understanding and describing human action, rather than merely critiquing the well-established and broad based VAT law, where transactions are taxed unless a specific exemption exists.

While an exemption may be desirable from a political standpoint, the VAT system is not weakened by an absence of such exemption. In other words, the strength of the VAT system is that it is able to tax the reality of the transaction without fully explaining it, while creating an exemption would require more of an explanation of the reality in order to do so.

[25] Council Directive (EU) 2016/1065 of 27 June 2016 amending Directive 2006/112/EC as regards the treatment of vouchers.

3. Normative Theory and Legal Foundation

3.1. Introduction

In the course of social events, phenomena manifest with regularity, to which humans must adjust their actions if they wish to succeed.[26] In the study of man, the distinctive and crucial feature is the concept of action. Human action is defined simply as purposeful behavior, clearly distinguishable from those movements which are not purposeful from the point of view of man.[27] Theories and methods from the perspective of purposeful human action will be able to explain data as currency where the legal dogmatic method is lacking. While Rothbard and von Mises were two of the foundational scholars of the Austrian School of Economics, the more recently active James Buchanan and Elinor Ostrom, also influential in explaining human action, gained more recognition, to the point that each won the Nobel prize in economics.

3.2. Natural Rights Theory

Frédéric Bastiat, a convinced and articulate free trader, firmly in the French laissez-faire tradition, who anticipated many of the insights of public choice theory and demonstrated the superiority of decisions by the impersonal market, also recognized the importance of the law and morality.[28] Bastiat states that ”Life, faculties, production - in other words, individuality, liberty, property - this is man. And in spite of the cunning of artful political leaders, these three gifts from God precede all human legislation, and are superior to it. Life, liberty, and property do not exist because men have made laws. On the contrary, it was the fact that life, liberty, and property existed beforehand that caused men to make laws in the first

[26] Ludwig von Mises (1949), *Human Action: A Treatise on Economics*, Yale University, New Haven, CT.

[27] Murray N. Rothbard (1962), *Man, Economy, and State*, Ludwig von Mises Institute, Auburn, AL.

[28] Frédéric Bastiat (2001), *The Law*. The Institute of Economic Affairs, London. (1st ed. *La Loi*. Paris, 1850).

place.” Further, Bastiat states that ”each of us has a natural right - from God - to defend his person, his liberty, and his property. These are the three basic requirements of life, and the preservation of any one of them is completely dependent upon the preservation of the other two. For what are our faculties but the extension of our individuality? And what is property but an extension of our faculties?”

Bastiat further explains that if each person has the right to defend his life, liberty, and property, even by force, then it follows that a group of men have the right to organize and support a common force to protect these rights constantly.[29] This collective right is therefore based on individual right, and thus cannot lawfully be used to destroy the person, liberty, or property of individuals or groups. In the government, however, Bastiat states that ”the law has been perverted by the influence of two entirely different causes: stupid greed and false philanthropy.”

According to Bastiat, man can live and satisfy his wants either by ceaseless labor, or by seizing and consuming the products of the labor of others.[30] Since man is naturally inclined to avoid the pain that labor consists of, he will resort to this kind of plunder whenever it is easier than work. Bastiat explains that plunder only stops when it becomes more painful and more dangerous than labor, stating that ”it is impossible to introduce into society a greater change and a greater evil than this: the conversion of the law into an instrument of plunder,” as it ”erases from everyone’s conscience the distinction between justice and injustice.”

While persons and groups in society with few exceptions obtain their income voluntarily either by selling goods and services to the consuming public or by voluntary gift, Rothbard puts it plainly when it comes to the coercion known as taxation: ”taxation is theft, purely and simply”.[31]

Bastiat explains the fate of non-conformists who suggest a doubt as to the morality of these institutions of the state apparatus and Government: ”It is then

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[29] Frédéric Bastiat (2001), *The Law*. The Institute of Economic Affairs, London. (1st ed. *La Loi*. Paris, 1850).

[30] Frédéric Bastiat (2001), *The Law*. The Institute of Economic Affairs, London. (1st ed. *La Loi*. Paris, 1850).

[31] Murray N. Rothbard, *Ethics of Liberty*, (Atlantic Highlands, NJ: Humanities Press, 1982), p. 162

boldly said that ’You are a dangerous innovator, a utopian, a theorist, a subversive; you would shatter the foundation upon which society rests.’”[32] This was the fate of the Messiah, when the religious court brought Him before Pilate and: ”where they started accusing him. ’We found this man subverting our nation, forbidding us to pay taxes to the Emperor and claiming that he himself is the Messiah - a king.”[33]

The background to this fate was an exchange of ideas, which is the foundational question that this paper also will seek to answer, in relation to how VAT should be approached: ”’Does Torah permit us to pay taxes to the Roman Emperor or not?’ But he, spotting their craftiness, said to them, ’Show me a denarius! Whose name and picture does it have?’ ’The Emperor’s,’ they replied. ’Then,’ he said to them, ’give the Emperor what belongs to the Emperor. And give God what belongs to God!’”[34]

Although Rothbard states that taxation is theft, a consumption tax fits more neatly into his outline of bribery, with the option of peaceful refusal to make an exchange.[35] The refusal cannot be seen as coercion, according to Rothbard.[36] While bribery is generally frowned upon, Rothbard discusses the legality of the parties involved in a typical bribe contract, concluding that the illicit action is solely the behavior of the taker of the bribe, who has violated his contract with the company by not performing as their proper agent. On the other hand, it is difficult to see what the payer of the bribe has done which libertarian law should consider as illegal, as there should be a property right to pay a bribe.[37]

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[32] Frédéric Bastiat (2001), *The Law*. The Institute of Economic Affairs, London. (1st ed. *La Loi*. Paris, 1850).

[33] David H. Stern (2016), *The Complete Jewish Study Bible*, Luke 23:2 p.1513, Peabody, MA, Hendrickson Publishers Marketing LLC.

[34] David H. Stern (2016), *The Complete Jewish Study Bible*, Luke 20:22-25 p.1507, Peabody, MA, Hendrickson Publishers Marketing LLC.

[35] Murray N. Rothbard (1982), *Ethics of Liberty*, p. 222, Humanities Press, Atlantic Highlands, NJ.

[36] Murray N. Rothbard (2004), *Power and Market*, p.1326, 3rd edition, Ludwig von Mises Institute. Auburn, AL. (1st ed. Institute for Humane Studies, 1970).

[37] Murray N. Rothbard (1982), *Ethics of Liberty*, p. 129-30, Humanities Press, Atlantic Highlands, NJ.

While there may be a natural inclination to refuse to pay taxes, philosophically taking the form of bribes, the response to the injustice of taxation should be left to the one above,[38] to the extent an individual is not breaking any mitzvah (commandment) of the Torah.[39]

As described in subchapter 2.2. of this paper, Adams was a proponent of the additive method of VAT, which would have been an alternative business tax. Rothbard concludes that a consumption tax as a direct tax is not possible because it will inevitably lead to an income tax.[40] The additive method was in contrast to the method that prevailed in the EU, supported by among others von Siemens.

In conclusion, while a consumption tax formulated as a direct tax (including the additive method of VAT) will lead to an immoral income tax, an indirect consumption tax like the VAT will allow for the economic actors to refuse to make a certain exchange where the bribe of VAT collected to the state would be required. Further, while the plunder in the form of taxation is illegal from a natural rights and libertarian law perspective, the payment of the tax by an individual or business is not, and can with good conscience be paid in order to keep the peace in society, fully trusting that justice will be served.

3.3. Public Choice Theory

According to Buchanan, there is no logical reason to apply completely different models of individuals in their political and economic behavior. In the context of the European Union, there is a link between VAT and the fee Member States pay. It is therefore logical to approach VAT from the perspective of the public choice

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[38] Deuteronomy 32:35-36 states ”Vengeance is Mine; I will repay: in time, their foot will slip; their day of disaster is near, their destiny hastens to meet them. For the LORD will vindicate His people, bring solace to His servants, when He sees their strength has slipped away, no one remains, no bond nor free.”

Jonathan Sacks (2021), *The Koren Tanakh, The Magerman Edition*, Deuteronomy 32:35-36 p.496, Karen Publishers Jerusalem Ltd., Jerusalem, Israel.

[39] ”Everyone is to obey the governing authorities. For there is no authority that is not from God, and the existing authorities have been placed where they are by God. Therefore, whoever resists the authorities is resisting what God has instituted; and those who resist will bring judgment on themselves.”

David H. Stern (2016), *The Complete Jewish Study Bible*, Romans 13:1-2 p.1626, Hendrickson Publishers Marketing LLC, Peabody, MA.

[40] Murray N. Rothbard (2004), *Power and Market*, p.1180, 3rd edition, Ludwig von Mises Institute. Auburn, AL. (1st ed. Institute for Humane Studies, 1970).

roles and their self-interest in increasing the tax-base of VAT, and subsequently the budget of the EU, or, in the terms of Frédéric Bastiat, plunder. On this basis, public choice theory explains why these systems are set in place.

James Buchanan summarizes that, normatively, Public Choice forces the analyst to compare relevant institutional alternatives, and that public choice is a 'theory of government failure' comparable to the 'theory of market failure' that emerged from theoretical welfare economics.[41] Buchanan defines "public choice theory" by clarifying references to economic theory, where public choice theory in essence approaches the sectors of government and law, the sector of public economy, with the methods and tools developed in economic theory, especially the Austrian school of economic theory. [42]

In both the theory of public choice and the theory of Austrian school of economics, the analysis revolves around the behavior of individual actors.[43] In public choice, it is the actors in the governmental sector, in their capacities as voters, as candidates for office, as elected representatives, as leaders or members of political parties, and as bureaucrats ("public choice roles"), that the theory attempts to explain and understand. The complex institutional interactions that these "public choice roles" are involved in within the context of policymaking and law are contrasted with the approach of government being looked at as a being or entity of its own, somehow separate from the individuals who have these public choice roles that participate in the process.

Public choice theory is therefore useful in analyzing different types of data as currency and the reasons of the policy decisions related to the treatment of data as currency, since it explains not only the law itself, but how it comes about. This public choice perspective is methodologically individualistic, in the same sense that economic theory in the vein of the Austrian school is. The actors in this

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[41] James M. Buchanan, "Politics without Romance: A Sketch of Positive Public Choice Theory and Its Normative Implications", (IHS-Journal, Zeitschrift des Instituts fur Höhere Studien, Wien 3, 1979)

[42] James M. Buchanan (1999), *The Logical Foundations of Constitutional Liberty*, p.45, Liberty Fund, Indianapolis, IN.

[43] James M. Buchanan, "Politics without Romance: A Sketch of Positive Public Choice Theory and Its Normative Implications", (IHS-Journal, Zeitschrift des Instituts fur Höhere Studien, Wien 3, 1979)

methodology are choosing, acting, behaving persons rather than organic units such as parties, provinces, or nations. This is certainly true in the context of the European Union, which lacks a sovereign territory, and where Member States are more or less loosely connected.

Buchanan doesn't argue that there would be a formal connection between the methodological individualism that describes formal public choice theory and the motivations of the persons in their behavior in their various public choice capacities. According to Buchanan, a fully consistent and methodologically individualistic theory of politics could be built on the assumption that all actors in their political roles seek only to further their own conceptions of some "common good," while disregarding their own more narrowly defined self-interest. But, even in this case, different individuals would not have the same understanding of what defines "common good." Therefore, economic models that assume that individuals seek to maximize their own utilities have been instrumental in developing public choice theory.

3.4. Governing the Commons (New Institutionalism)

There are multiple types of data. Data that can be freely copied, with permission or not, is in practice publicly available without a clear ownership structure. There is also now verifiably scarce data with the introduction of the blockchain-based technology Bitcoin, the first verifiably scarce money. Central Bank created fiat money, which has no reserves, on the other hand, is also simply data, created by the banking cartel that protects its members from competition, with the primary purpose of gaining power and exerting control over individuals.[44]

Garrett Hardin presented the expression "the tragedy of the commons," outlining that a degradation of the environment is to be expected whenever many individuals use a scarce resource in common.[45] In presenting this model, Hardin envisions a pasture that is available to all herders of animals, and then investigates

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[44] G. Edward Griffin (1994), *The Creature from Jekyll Island: A Second Look at the Federal Reserve*, American Media, Westlake Village, CA.

[45] Garrett Hardin, (1968), "The Tragedy of the Commons", Science 162:1243-8.

the structure of this situation from the perspective of a rational herder. The herders receive a direct benefit by their animals, and a delayed cost of the eventual overgrazing by all animals. In this case, a herder is incentivized to increase the number of animals in order to maximize the direct benefit, while bearing only a fraction of the delayed cost as the result of overgrazing. Hardin's model of the tragedy of the commons has further been formalized as a prisoner's dilemma game[46] by Dawes, among others.[47]

Elinor Ostrom has reflected on the tragedy of the commons and the ways in which institutions for collective action could be governing the commons. As one example of the tragedy of the commons, she gives the problem of overfishing off the New England coast, where the catches of cod, flounder, and haddock, which were once plentiful, were at the time of writing in the 1990's only a quarter of that of the 1960's.[48] While the United States federal government had sporadically legislated and regulated the fishing industry in an attempt to govern these natural resources for their long-term economic viability, the efficiency of such regulation was questioned by the representatives of the fishers.

Data being used as currency, the question arises of purchasing power being a sort of common-property resource (CPR), where the tragedy of the commons is present. The digital printing of fiat money, be it at the central bank level, or by the creation of new currency units through the taking on of debt by businesses and individuals, reduces the purchasing power, since inflation is always and

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[46] The game includes a set limit of animals that can graze (a number represented by L) and two participants, each facing the choice of the two strategies of "cooperate" and "defect". In the cooperate-strategy, each of the herders can let L/2 animals graze, while they will let as many animals as possible graze in the defect-strategy. The potential outcomes presented are first, where both herders cooperate, each will receive 10 units of profit. Second, where both choose to defect, each will receive zero profit. Third, if one will choose to cooperate while the other chooses to defect, the defector receives 11 in profit while the one choosing to cooperate obtains a negative 1 in profit (a loss of 1). In the case where each herder chooses independently with no option to enter into a binding contract with the other herder, each herder will choose the dominant strategy, which is to defect, and therefore each obtain no profit. In this case, the best individual strategy is not a Pareto-optimal outcome. A Pareto-optimal outcome occurs when there is no other outcome strictly preferred by at least one player that is at least as good for the others. The Pareto-optimal outcome in this case would be for both herders to cooperate, as it is preferred by both herders to the equilibrium outcome of the situation where both defect.

[47] Robyn M. Dawes (1973), "The Commons Dilemma Game: An N-Person Mixed-Motive Game with a Dominating Strategy for Defection". ORI Research Bulletin 13:1-12.

[48] Elinor Ostrom (1990), *Governing the Commons: The Evolution of Institutions for Collective Action*, p.1, Cambridge University Press, New York, NY.

everywhere a monetary phenomenon.[49] For each new debt, the common pool resource of monetary purchasing power is watered down.

Ostrom explains that the question of how best to govern natural resources that many individuals access and use in common is not more settled in academia than it is in the world of politics. Some scholarly articles about the ”tragedy of the commons” recommend that ”the state” control most natural resources to prevent their destruction, while others recommend that privatizing those resources will resolve the problem.[50] In practice, however, it is not evident that either of these two solutions are able to uniformly resolve the problem. On the other hand, Ostrom states that communities of individuals have relied on institutions resembling neither the state nor the market to govern some resource systems with reasonable degrees of success over long periods of time.

Ostrom describes three models that are frequently used to provide a foundation for recommending state or market solutions, and then goes on to describe theoretical and empirical alternatives to these models to begin to illustrate the diversity of solutions that go beyond states and markets and to explain how communities of individuals fashion different ways of governing the commons.[51] In the current fiat monetary system, elements of both the ”state" and ”privatize” solutions are present, with detrimental effect.[52]

Mancur Olson examined the difficulty in getting individuals to pursue their joint welfare, as contrasted to individual welfare.[53] Olson challenged the presumption that the possibility of a benefit for a group would be sufficient to generate collective action to achieve that benefit and stated ”unless the number of individuals is quite small, or unless there is coercion or some other special device

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[49] Milton Friedman (1963), ”Inflation: Causes and Consequences”, Bombay: Asia Publishing House for the Council for Economic Education (Bombay)

[50] ibid, p.1

[51] ibid, p. 6

[52] wtfhappenedin1971.com, retrieved on May 21, 2023.

[53] Mancur Olson (1965), *The Logic of Collective Action. Public Goods and the Theory of Groups*, Harvard University Press, Cambridge, MA.

to make individuals act in their common interest, rational, self-interested individuals will not act to achieve their common or group interests."[54] The basic premise is that one who cannot be excluded from obtaining the benefits of a collective good once the good is produced has little incentive to contribute voluntarily to the provision of that good (this is the free-rider problem).

Ostrom, however, warns about using these models metaphorically as the foundation for policy, as they assume the constraints to be fixed, and by viewing individuals as prisoners, policy prescriptions will address this metaphor. Rather, Ostrom addresses the question of how to enhance the capabilities of those involved to change the constraining rules of the game to lead to outcomes other than remorseless tragedies. Rejecting the notion of Hardin, that "if ruin is to be avoided in a crowded world, people must be responsive to a coercive force outside their individual psyches, a 'Leviathan,' to use Hobbes's term,"[55] Ostrom states that the presumption that an external Leviathan is necessary to avoid tragedies of the commons leads to recommendations that central governments control most natural resource systems.[56]

Ostrom demonstrates that in a central-authority version of the prisoner's dilemma game, the central agency will need to have near complete information about the carrying capacity of the meadow, and an ability to punish defections with nearly no errors in order to adjust the dominant strategy where both herders defect into a Pareto-optimal strategy where both herders cooperate.[57] Further, Ostrom points out that this idealized central-authority model neglects the costs of setting up such a system.

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[54] Mancur Olson (1965), *The Logic of Collective Action. Public Goods and the Theory of Groups*, p.2, Harvard University Press, Cambridge, MA.

[55] Garrett Hardin (1978), "Political Requirements for Preserving our Common Heritage. In Wildlife and America", ed. H. P. Bokaw, p. 314, Council on Environmental Quality, Washington, DC.

[56] Elinor Ostrom (1990), *Governing the Commons: The Evolution of Institutions for Collective Action*, p.9, Cambridge University Press, New York, NY.

[57] Elinor Ostrom (1990), *Governing the Commons: The Evolution of Institutions for Collective Action*, p.10, Cambridge University Press, New York, NY.

In a similar vein, Ostrom challenges the notion of privatization as the only way to solve for the tragedy of commons.[58] The assumption of this model is that the meadow is perfectly homogenous over time in its distribution of available fodder, as well as the need for fencing in order to control each herder's animals. Since that is not the case, solving for these shortcomings would be done with costly fencing and insurance schemes, rendering this solution not optimal. Olson concludes that both centralization advocates and privatization advocates accept as a central tenet that institutional change must come from outside and be imposed on the individuals affected. Olson argues that both positions are too sweeping in their claims, and argues that instead of there being a single solution to a single problem, many solutions exist to cope with many different problems. Therefore, she argues that getting the institutions right is a difficult, time-consuming, conflict-invoking process.

Instead, Ostrom proposes an alternative solution as an institutional option where the herders themselves can make a binding contract to commit themselves to a cooperative strategy that they themselves will work out.[59] In this scenario, it is only the enforcement of the contract that is assumed to be more or less unfailing, and that comes at a cost.

The participant-driven design of the contract is also a key aspect of the Ostrom-model solution. In this scenario, the herders are not dependent on the accuracy of the information obtained by a distant government official regarding their strategies. If one of the herders suggests a contract based on incomplete or biased information, the other herder can indicate an unwillingness to agree. The contract is then enforced only to the extent agreed upon by both parties. Where the enforcer decides to charge too much for its enforcement services, neither herder would agree to such a contract. Ostrom therefore proposes that it may be an option for the herders to hire a private agent to take on the role of the enforcer.

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[58] Elinor Ostrom (1990), *Governing the Commons: The Evolution of Institutions for Collective Action*, pp.12-13, Cambridge University Press, New York, NY.

[59] Elinor Ostrom (1990), *Governing the Commons: The Evolution of Institutions for Collective Action*, pp.15-21, Cambridge University Press, New York, NY.

Since the herders themselves are incentivized to both design their own contract in light of the information they have at hand, and to record infractions, the enforcers may not need to hire monitors to observe the activities of the contracting parties. In an empirical example of fishers in Alanya, Turkey, Ostrom explains a participant-devised system of rules where resources are not wasted searching for or fighting over a fishing site. The process of monitoring and enforcing the system is accomplished by the fishers themselves as a by-product of the incentive created by the rules where each fisher is rotating from site to site during a fishing season.

Ostrom concludes that recommending a single solution for commons problems presume that central authorities will function in the field as they have been designed to do in the theoretical textbooks, i.e. acting with adequate information and implementing the policies without error. On the other hand, those advocating for the private-property approach assume that dividing the rights to access common-property resources will lead to the most efficient use of them. Ostrom explains that both the centralizers and the privatizers frequently advocate oversimplified and paradoxically, almost ”institution-free” institutions. Instead, Ostrom stresses the importance of the ”institutional details,” cautioning that a set of rules used in one environment may have vastly different consequences if used in a different environment.

3.5. Conclusion

While natural rights are always violated by a government, subchapter 3.2. on natural rights concluded that paying bribes should not be considered illegal according to libertarian law.

Bitcoin is a real world example of an alternative, Ostrom-style, participant-driven solution to the CPR problem of currency, and is an important aspect in the discussion of data as currency, since blockchain technology has enabled verifiably scarce ways of ownership of data, as well as of enforcement of a contract at a low or nominal cost. On the other hand, the common pool resource of currency in the current fiat monetary system has aspects of both the central authority and privatize solutions, to the detriment of the purchasing power.

The public choice roles in the EU (the politicians and bureaucrats) will act in their capacities in order to apply VAT where practically possible, in order to grow the fees Member States pay to the EU.

4. Digital Money

4.1. Introduction

A commodity that comes into general use as a medium of exchange is defined as being a money.[60] Therefore, data that in essence is a commodity, such as Bitcoin, can serve as money if it comes into general use in such a way. The most significant invention since the emergence of electronic payment methods is Bitcoin and its blockchain technology.[61] Until the genesis of Bitcoin, there were two clear categories of payment methods that did not overlap. They were cash payments without the need for an intermediary on the one hand, and all other payment methods that required a trusted third party arranging for the final settlement of the payment on the other hand.

The VAT Directive recognizes payment methods intermediated by a third-party (including vouchers, as discussed in the chapter on EU VAT), as well as cash equivalent payments without a third party involved (including certain discount codes). As these categories are made less relevant by Bitcoin, the understanding of data as money from the perspective of New Institutionalism, as described by Ostrom, will allow for a more practical categorization of data as currency. In a sense, it is then the institutional framework that determines how data as currency is classified and treated, rather than the previously neatly organized categories of cash and intermediated payments.

4.2. What is Money?

Bitcoin is a new technology that serves the function of money.[62] It is a digital age solution to the problem of how to move economic value across time and space.

[60] Murray N. Rothbard (2004), *Man, Economy, & State*, p.192, second edition, Ludwig von Mises Institute, Auburn, AL.

[61] Saifedean Ammous (2018), *The Bitcoin Standard: The Decentralized Alternative to Central Banking*, 1st ed. John Wiley & Sons, Inc., Hoboken, NJ.

[62] Saifedean Ammous (2018), *The Bitcoin Standard: The Decentralized Alternative to Central Banking*, 1st ed. John Wiley & Sons, Inc., Hoboken, NJ.

The most basic way to exchange value is by barter (direct exchange), which is not practical in a complex economy. Nevertheless, tax legislation, including VAT, has provisions in place in order to tax barter transactions. The only way around the limitations of direct exchange (the lack of coincidence in wants and timeframes between transacting parties), is through indirect exchange by the use of a *medium of exchange* (which, when widely accepted, is called money). For money to effectively be able to address the lack of coincidence in timeframes, it will have to have the ability to hold value into the future, to be a *store of value*. Further, the wide acceptance of the money will allow all prices to be expressed in its terms, in other words, it will serve as a *unit of account*. In addition to these three widely-accepted functions of money, Jevons includes a fourth one, namely a *standard of deferred payments*, in other words, the function of valuing debt.[63] The world view of Jevons assumes debt will exist in the system, which seems not to be clearly the case in the ideal world of Ammous. Rothbard, on the other hand, states that all of the functions of money are simply corollaries of the one great function: the medium of exchange.[64] Further, Ammous states two characteristics of money that have been observed historically. One of them is fungibility, in other words, that any unit of the money is equivalent to any other unit. The other is liquidity, or, the ability of the owner to sell quickly at market price. Bitcoin possesses both these characteristics.[65]

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[63] William Stanley Jevons (1875), *Money and the Mechanism of Exchange*,

[64] Murray Rothbard (1963), *What Has Government Done to Our Money?*, p.11, Ludwig von Mises Institute, Auburn, AL.

[65] Saifedean Ammous (2018), *The Bitcoin Standard: The Decentralized Alternative to Central Banking*, p.170, 1st ed. John Wiley & Sons, Inc., Hoboken, NJ.

4.3. Bitcoin as Digital Cash

Before Bitcoin[66], payment methods fell into one of two categories, namely cash payments and intermediated payments. Cash payments are immediate and final, and are carried out in person between two parties, with no trust required by either of the parties. Intermediated payments, such as checks, credit cards, debit cards, bank wire transfers, money transfer services, and financial technology (fintech) solutions such as PayPal, all require a trusted third party in order to handle the transaction between two parties. All digital payments required a trusted third party since digital objects (data) thus far were not scarce, or in other words, were possible to be reproduced endlessly and used multiple times. Sending data in that system would only duplicate the data, and therefore the data could be spent multiple times.

The transfer of control of transaction outputs from the sender private key to a recipient private key, using the recipient public key, is the data used as currency. Besides allowing for digital payments without having to rely on a trusted third-party intermediary, Bitcoin is also verifiably scarce, and therefore is the first example of digital cash.

4.4. Competition in Currency

Ammous concedes that it had always been theoretically possible to produce an asset with a predictably constant or low rate of supply growth in order for it to be

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[66] Satoshi Nakamoto (2008), ”Bitcoin: A Peer-to-Peer Electronic Cash System”, bitcoin.org/bitcoin.pdf retrieved on April 11, 2023.

Bitcoin, as described by its initial producer, Satoshi Nakamoto, in the abstract of the foundational whitepaper is:

> a purely peer-to-peer version of electronic cash would allow online payments to be sent directly from one party to another without going through a financial institution. Digital signatures provide part of the solution, but the main benefits are lost if a trusted third party is still required to prevent double spending. We propose a solution to the double-spending problem using a peer-to-peer network. The network timestamps transactions buy hashing them into an ongoing chain of hash-based proof-of-work, forming a record that cannot be changed without redoing the proof-of-work. The longest chain not only serves as proof of the sequence of events witnessed, but proof that it came from the largest pool of CPU power. As long as the majority of CPU power is controlled by nodes that are not cooperating to attack the network, they’ll create the longest chain and outpace attackers. The network itself requires minimal structure. Messages are broadcast on a best effort basis, and nodes can leave and rejoin the network at will, accepting the longest proof-of-work chain as proof of what happened while they were gone.

considered to be money, but that governments would never allow private parties to issue their own private currencies and transgress on the main way in which government funds itself and grows. This shows the conflict between the centralize and privatize camps that Ostrom speaks of, although the conflict is really between the banking cartel members and their competitors.

Various privatized alternatives to money were envisioned in the 1997 book The Future of Money in the Information Age, edited by James A. Dorn of the Cato Institute.[67] The essays in the book were presented at the 14th annual monetary conference in Washington, DC. With the hindsight of a quarter century, it is clear Ammous is correct in his assessment, as none of the ideas in the book exist as an alternative to, and outside of the sphere of influence of, the central banks. Recalling the institutional view Ostrom presented, central banking is based on the central-authority solution to the question of moving economic value across time and space, while the ideas of the Cato Institute monetary conference are some of the ones the privatization wing espoused. Bitcoin is clearly not a central-authority solution, but neither is it a solution from the privatize-camp. It is a decentralized, participant-driven design of monetary policy in the vein of new institutionalism.

One of the foundational choices early participants of Bitcoin made were a predictable supply growth (i.e. the inflation rate of Bitcoin). Historically, governments have been able to fund unpopular wars through inflation of the fiat currency.[68] A stated benefit from a hard currency like Bitcoin is that the government is limited in its war effort by the taxes it can collect. Another foundational aspect of Bitcoin is that the network is of a peer-to-peer structure in which all members have equal privileges and obligations and in which there are no central coordinators who can change the rules of the network. An example of another peer-to-peer network is BitTorrent for sharing files online, often without the intellectual property rights to the file being shared. Theoretically, platform

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[67] James A. Dorn et. al. (1997), *The Future of Money in the Information Age*, Cato Institute Press, Washington, DC.

[68] Saifedean Ammous (2018), *The Bitcoin Standard: The Decentralized Alternative to Central Banking*, 1st ed. John Wiley & Sons, Inc., Hoboken, NJ.

rules of the VAT system are sufficient to tax BitTorrent transactions. In the case of Bitcoin, however, a new monetary system has been created, rather than imposing the system on an existing one.

4.5. Blockchain Technology and Altcoins

Bitcoin was the first example of a peer-to-peer electronic cash, but it was not the last. There have been numerous cryptocurrencies launched since, but none have succeeded in becoming money in the same way as Bitcoin, primarily because none have been outside of the control of a third party. In a sense, they have all been failed attempts to privatize this new institutional money. Tragically, additional decentralization was introduced to Bitcoin due to the death or disappearance of central authority figures Nakamoto and Hal Finney, an early contributor to the project.

4.6. e-Money

According to the E-Money Directive of the EU, "'electronic money' means electronically, including magnetically, stored monetary value as represented by a claim on the issuer which is issued on receipt of funds for the purpose of making payment transactions as defined in point 5 of Article 4 of Directive 2007/64/EC, and which is accepted by a natural or legal person other than the electronic money issuer" and "'electronic money institution' means a legal person that has been granted authorization under Title II to issue electronic money".[69]

[69] Directive 2009/110/EC of the European Parliament and of the Council of 16 September 2009 on the taking up, pursuit and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC

5. EU VAT

5.1. Introduction

This paper covers the VAT treatment of data used as currency. Central to this discussion are some crucial foundational VAT concepts, required in order to explain the VAT situation of data forming part or all of the consideration paid, which is the first research question to be answered by this paper. This chapter will also introduce the EU directive that clarified an unclear real world situation of the VAT treatment of vouchers, contrasting it with the treatment discount codes. Both situations provide a view on treatment of alternative payment methods, one of which was enacted into the VAT directive, and the other where the general rules apply. The VAT treatment in these two cases can offer clarity on alternative types of consideration used in a transaction that are closely related to data as currency, and that the public choice roles in the EU have come to differing approaches to each of them, with two outcomes based on the detail of the payment instrument.

The second research question of this paper relates to the taxable person. The e-commerce VAT rules, as well as new digital era platform rules, are presented in order to determine the taxable person, or the person stepping into the role of such, in the cases in which data is used as currency. The new e-commerce and platform rules are discussed in order to show how entities could alternatively be seen as the taxable person for a specific transaction.

5.2. VAT Concepts

5.2.1. The Scope of EU VAT

There are two aspects of the scope of EU VAT. First, there is the geographical or territorial scope of VAT, described in Article 5 of the VAT Directive, which establishes which Member State has the right to tax a transaction, or if it lies outside of the geographical scope of EU VAT by virtue of the place of supply falling outside of the EU VAT area, which covers most, but not all, of the

sovereign territory of the Member States.[70] As an example, the Åland Islands are part of the EU, but not of the EU VAT area.[71] Second, there is the substantive scope of VAT. The substantive scope of VAT takes into consideration the different concepts needed in order to determine whether or not EU VAT will apply to a specific transaction. There are three concepts that need to be considered within the determination of the substantive scope of VAT. These are *taxable person*, *taxable transaction*, and *place of taxation*. EU VAT applies when taxable transactions are deemed to be made by a taxable person within the territory of a Member State in the EU VAT area.[72]

5.2.2. Taxable Persons

Article 9 of the VAT Directive defines a taxable person as ”any person who independently, carries out in any place any economic activity, whatever the purpose or result of the activity.”[73]

5.2.3. Taxable Transactions

Distinct from sales taxes, VAT is not a tax on goods and services themselves, but it is rather the transaction of the goods and services that is taxed. When goods and services are sold, in general VAT will apply. In certain cases, however, VAT will also apply when no consideration is paid or when there is a transaction within one legal entity rather than between two legal entities.[74]

Article 2 of the VAT Directive[75] defines taxable transactions as:

- The supply of goods for consideration within the territory of a Member State by a taxable person acting as such;

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[70] Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax

[71] European Commission, Territorial status of EU countries and certain territories, https://taxation-customs.ec.europa.eu/territorial-status-eu-countries-and-certain-territories_en retrieved April 23, 2023.

[72] Eleonor Kristoffersson & Pernilla Rendahl (2020), *Textbook on EU VAT*, pp. 37-40, 3rd ed. Iustus Förlag AB. Uppsala.

[73] Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax

[74] Eleonor Kristoffersson & Pernilla Rendahl (2020), *Textbook on EU VAT*, p.51, 3rd ed. Iustus Förlag AB. Uppsala.

[75] Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax

- The intra-Community (or, since the Lisbon Treaty of 2009, intra-Union) acquisition of goods for consideration within the territory of a Member State;
- The supply of services for consideration within the territory of a Member State by a taxable person acting as such; and
- The importation of goods.

5.2.4. The Place of Taxation

The place of taxation within the EU VAT area is of importance in order to determine which state has the right to tax a taxable transaction that falls within the scope of EU VAT supplied by a taxable person. In the EU, there are two principles for the place of taxation. The destination principle entails that the goods or services are taxed where the recipient is located, while the country of origin principle entails that tax is applied based on the location of the seller's establishment. The country of origin principle is mainly applied to limited cases of supplies of goods to end consumers, although a seller will be required to register in the country of the consumer once a fairly low threshold of sales is reached in that specific country. Since 2015, the Mini One Stop Shop (MOSS) regime offers a simplified alternative to these registrations, however. In the case of destination based taxation, the supply will need to be exempted from taxation in the country of origin, in order to avoid double taxation of the transaction.

It is the chargeable event that determines which Member State has the right to tax the transaction. If the chargeable event is the supply, the member state of the seller generally has the right to tax the transaction. If the chargeable event instead is the acquisition, it is generally the member state in which the recipient of the good or service resides that has the right to tax the transaction.

5.2.5. Reverse Charge

Mostly, it is the supplier (often the same as the seller) that is responsible for charging VAT on transactions. In some cases, however, the acquirer is the taxable person that is required to account for both sides of the transaction. This situation is called reverse charge. Reverse charge is often used in Business-to-Business

(B2B) transactions, and applies mainly to services, but has also been required to be used as a temporary measure in certain situations where the European Council has attempted to prevent VAT fraud.[76]

5.2.6. Exemptions

As a principle, VAT taxes the added value at each step of the production and distribution chain. Some transactions are exempt from EU VAT, however, based on the place of taxation, a public interest, or other objectives.[77] Exemptions, however, need to be interpreted strictly, meaning there are certain exceptions to, for example financial services, which in general are exempt from VAT.[78] Some exemptions do not entail a right to a deduction, so that input VAT becomes a cost to the business, while others do. The exemptions with a right to deduction become in effect a zero-rated supply.

5.2.7. Recovery (Deductions and Refunds of Input VAT)

The recovery of input VAT is what makes a consumption tax a VAT, ensuring that only the added value created at each step of a transaction chain is taxed, further ensuring that the tax is proportional regardless of the number of times goods or services are sold before reaching the end consumer. The general rule for deduction is that goods and services that are used for the purposes of the taxed transactions of a taxable person, the taxable person shall be entitled to deduct from the VAT which he is liable to pay, VAT due or paid in respect of supplies to him of goods or services, and a number of other scenarios as described in the VAT Directive.[79]

5.3. Discount codes

A discount code is not deemed to be a voucher from an EU VAT definition perspective, which means that the general VAT principles apply. It is therefore

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[76] European Council, VAT reverse charge mechanism: preventing VAT fraud, consilium.europa.eu/en/policies/vat-reverse-charge/ retrieved on May 10, 2023.

[77] Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax, TITLE IX - EXEMPTIONS

[78] C-287/00 Commission of the European Communities v Federal Republic of Germany, ECLI:EU:C:2002:388

[79] Council Directive 2006/112/EC of 28 November 2006 on the common system of value added tax. TITLE X - DEDUCTIONS Article 168

interesting to consider if using data as currency could be seen as comparable to using a discount code. Discount codes are not SPVs or MPVs governed by the Vouchers Directive, and are described as instruments entitling the holder to a discount upon purchase of goods or services while having no right to receive such goods or services. Analogously, in the absence of specific regulation on data as currency, the general VAT principles apply. Therefore, the case law concerning discounts is of importance in understanding the current law and its impact on using data as currency.

5.4. Case Law

The CJEU has a wealth of case law on discounts and when they affect the taxable amount, e.g. C-230/87 Naturally Yours, C-126/88 Boots, C-317/94 Elida Gibbs, C-398/99 Yorkshire, C-53/09 Loyalty Management and C-55/09 Baxi Group.

5.4.1. Naturally Yours

In the case Naturally Yours, the supplier of goods to a retailer charged a price significantly lower than the resale price charged to the consumer. Since the supply was made in exchange for the retailer organizing a sales party, the ”subjective value” was deemed to include not only monetary consideration, but also the value of the service provided by the retailer. While the court used the term ”subjective value”, it didn’t use it to describe the perceived value a purchaser in her own mind perceived to have gained in the way Austrian School of Economics scholar use the term, but rather, the court deemed there to be a market value for this consideration, at which the transaction took place, and to which VAT applied. Where data is provided as a means of payment in order to access social media, this case is relevant since the access or entry into the forum of the social media platform could be seen as similar to the retailer organizing a sales party.

5.4.2. Boots

In case C-126/88, the retailer Boots used price reduction coupons as a form of promotion. The court found that the taxable amount consisted only of consideration actually received, and not of the amount of the price reduction. This

decision had to do with a refund or price reduction made to the immediate customer of the taxpayer.

5.4.3. Elida Gibbs

In the case C-317/94 Elida Gibbs, the manufacturer had issued cash-back and money-back coupons. Consumers redeemed the cash-back coupons with the manufacturer in order to receive a cash refund, and the money-off coupons with the merchant in order to receive a reduced price at a merchant. The manufacturer then refunded the merchant for the money-off coupons. In both situations, the court decided it was the supply to the consumer that was impacted by the redemptions, and the consideration for the prior supply from the manufacturer to the retailer remained the originally invoiced price. The price reduction, however, was not deemed to be made by the taxpayer (the merchant) in the supply of goods to the consumer, but rather, a third party to that transaction (the manufacturer). Therefore, the impact did not come in the form of a price discount or rebate as in the case of Boots (termed ”price reduction”), but as consideration paid by a third party, as Gibbs was seen to be stepping into the shoes of the consumer and paying a part of the total consideration. Contrary to Boots, the coupons did not grant any discount or price reduction by Gibbs to the merchant. This is interesting from the point of view of the new rules introduced through the EU VAT e-commerce package and the VAT treatment of the platform economy (both discussed further down in this chapter) as both the Elida Gibbs case and the new rules make it clear that an intermediary can be seen as stepping into the shoes of another both in the capacity of a payer in the case where general VAT principles apply, and as a supplier in the case of the new rules.

5.4.4. Yorkshire

In the case C-398/99 Yorkshire, the point of contention was the supply that the price reduction coupons related to. The taxpayer stated that they were related to the supply between the manufacturer and the merchant, and that a legal relationship between the provider and the recipient of the service was required, which Yorkshire argued was the acceptance of the coupon by the merchant and not the supply of the goods from the merchant to the consumer. The court clarified

that tax neutrality is the defining principle of the EU VAT Directive, and that consideration includes everything obtained by the supplier from the purchaser, the customer, or from a third-party for the supplies in question, therefore upholding the ruling of Elida Gibbs, stating that the taxable amount is the cash amount paid by the customer plus the amount which corresponds to the price reduction paid by the manufacturer.

5.4.5. Case Law related to the Supply of Discount Codes

The supply, for monetary (cash) or non-monetary (barter) consideration, of discount codes that are deemed price reduction coupons, by the issuer or by an intermediary, is in scope for EU VAT as a supply of a taxable service. A direct link between the supply and the non-monetary consideration is required, however, based on the cases C-230/87 Naturally Yours Cosmetics and C-410/17, A Oy.

In A Oy, a demolition company sold scrap metal from their demolition site. The court ruled the supply to be a part of a barter transaction, the company therefore having to report VAT on the scrap metal through the reverse charge mechanism, as is ordinarily the case. In cases of barter transactions, where a non-monetary consideration can be identified, a supply of services in scope for EU VAT exists. In determining the taxable amount in these situations, it is of importance to ascertain what amount the recipient of the discount code would have paid if actual money had been used as payment of a non-barter transaction. The relevant court cases establishing this principle are C-380/99 Bertelsmann and C-33/93 Empire Stores.

5.4.6. Skatteverket (Swedish Tax Agency) v David Hedqvist

In ECJ case C-264/14, the court ruled on whether or not transactions to exchange a traditional currency for the Bitcoin virtual currency or vice versa, which Mr Hedqvist wished to carry out electronically via the website of his intended company, were subject to VAT.[80] The company would purchase bitcoin from private individuals or companies, or from an international exchange site, then reselling the units on such an exchange site, store them in the custody of the

[80] C-264/14 Skatteverket v David Hedqvist, ECLI:EU:C:2015:718

company, or sell them to private individuals or to companies that place an order on its website. The price proposed by the company to clients would be based on the current price on a particular exchange site, to which a certain percentage would be added in order to make a profit, without charging any other fees.

Acknowledging Bitcoin is a means of payment used in a similar way to legal tender, the ruling delivered on Mr Hedqvist's request was based of the judgment in First National Bank of Chicago C-172/96, EU:C:1998:354, with the outcome that Mr Hedqvist would be supplying an exchange service effected for consideration, covered by the VAT exemption[81]. The term "legal tender" referred to in Article 135(1)(e) of the VAT Directive is used in order to restrict the scope of the exemption as regards bank notes and coins, and must be taken to mean that it relates only to bank notes and coins and not to currencies, which is also consistent with the objective of the exemptions of Article 135(1)(b) to (g) of the VAT Directive, which is to avoid the difficulties involved in making financial services subject to VAT.

The court recognized that Bitcoin cannot be characterized as tangible property within the meaning of Article 14 of the VAT Directive, as virtual currency has no purpose other than to be a means of payment, with the same being true for traditional currencies involving money which is legal tender. Therefore, the court stated that the transactions Mr. Hedqvist planned do not fall within the concept of supply of goods,[82] but of services.[83] The supply of services is subject to VAT if there is a direct link between the services supplied and the consideration received by the taxable person.[84][85] Based on the facts of the case, the company of Mr. Hedqvist would agree with its counterpart to reciprocally transfer amounts of a certain currency and receive the corresponding value in Bitcoin or vice versa, and be remunerated for the service by a consideration equal to the margin included in

[81] under Chapter 3, Paragraph 9, of the Swedish Law on VAT

[82] Article 14 of the VAT Directive

[83] Article 24 of the VAT Directive

[84] C-53/09 Loyalty Management UK

[85] C-55/09, Baxi Group, EU:C:2010:590

the exchange rate. The court held that the transactions constitute the supply of services for consideration within the meaning of Article 2(1)(c) of the VAT Directive.

Transactions exempt from VAT under Article 135(1)(d) to (f) in order to alleviate the difficulties connected with determining the taxable amount and the amount of VAT deductible,[86] are financial transactions even though they do not necessarily have to be carried out by banks or financial institutions,[87] are defined according to the nature of the services provided,[88] and concern services or instruments that operate as a way of transferring money.[89]

In contemplating the exemption in Article 135(1)(d), the court stated that, Bitcoin, being a contractual means of payment, it cannot be regarded as a current account or a deposit account, a payment or a transfer, and unlike debt, checks and other negotiable instruments, Bitcoin is a direct means of payment between the operators that accept it.

Article 135(1)(e) exempts transactions involving currency and bank notes and coins used as legal tender, as previously noted, to restrict the scope of the exemption, but the various language versions of the article do not allow it to be determined without ambiguity whether or not the provision applies only to transactions involving traditional currencies or if it is also intended to cover transactions involving another currency. Concepts used in that provision must be interpreted and applied uniformly in the light of the versions in all the languages of the EU. Further considering the intent of the article, the court held that Mr Hedqvist's exchange transactions have the same difficulties connected with determining the taxable amount and the amount of VAT deductible as traditional currencies, and therefore follows from the context and the aims of Article 135(1)(e) that transactions involving Bitcoin must be exempt from VAT.

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[86] C-455/05 Velvet & Steel Immobilien, EU:C:2007:232, paragraph 24

[87] C-455/05 Velvet & Steel Immobilien, EU:C:2007:232, paragraphs 21-22

[88] C-175/09 Axa UK, EU:C:2010:646, paragraphs 26-27

[89] C-461/12 Granton Advertising, EU:C:2014:1745, paragraphs 37-38

The court further referred to a 2012 report by the European Central Bank on virtual currencies, stating that a virtual currency can be defined as a type of unregulated, digital money, which is issued and controlled by its developers and accepted by members of a specific virtual community. They differ from electronic money, as defined in the E-Money Directive of the EU, in so far as, unlike that money, for virtual currencies the funds are not expressed in traditional accounting units, such as in euro, but in Bitcoin.[90]

Notably, El Salvador made Bitcoin legal tender within the country on September 7, 2021[91], further strengthening the position of Bitcoin as currency treated as a commodity, while further separating Bitcoin from other cryptocurrencies that are mostly treated as securities, and are best described as ”privatize" solutions to the common pool resource problem of purchasing power of currency in Ostrom’s framework of theory.

5.5. Amending Directives for EU VAT: *Voucher Directive*

The ”Voucher Directive” from January 1, 2019, clarified and harmonized at the EU level the VAT rules about vouchers that can be used for redemption against goods or services.[92] A voucher is an instrument that can be either electronic or in physical form, and entails an obligation to accept it as payment. According to the Directive, vouchers can be either single-purpose vouchers (SPV), where the place of supply of the goods or services and the VAT due are known at the time of the issuance of the voucher, or multi-purpose vouchers (MPV), which consist of all other vouchers.[93]

A transaction of an SPV is regarded as a supply of the goods or services that are eventually received in exchange for the voucher, with the corresponding VAT due at the time of the sale of the voucher. The actual delivery of the goods or services

[90] C-264/14 Skatteverket v David Hedqvist, ECLI:EU:C:2015:718

[91] Official Journal of El Salvador, National Press of El Salvador, Diario Oficial, número 110, tomo no 431, 9 de junio de 2021.

[92] Council Directive 2016/1065

[93] EU VAT Directive Article 30a (1)

is out of scope of VAT and not an independent transaction, as the VAT has already been reported.

Based on Article 30 a (3), all vouchers which are not considered SPVs are MPVs by default. Put differently, at the time of issuance, it is unclear what goods or services the MPV will be redeemed for. Therefore, it is at the time of the provision of services or goods that VAT liability is triggered, while the transfer or the voucher is out of scope for VAT. Since Bitcoin is programmable money, it could fulfill any of these voucher scenarios, depending on how that particular amount of bitcoin is programmed, if at all. Therefore, this is a demonstration of how the use of data determines the taxability, rather than data being taxable itself.

5.6. Amending Directives for EU VAT: *e-commerce package*

5.6.1. Introduction

In order to present the intent of the European Commission to regulate the VAT aspects of e-commerce, and the direction the EC takes in order to stay relevant in the digital era more broadly, this paper will present the recently introduced amendment to the VAT directive[94], and the implementing regulation[95], referred to as the VAT e-commerce package, which became applicable for cross-border B2C e-commerce activities within the EU and into the EU on July 1, 2021. The main objectives for the EU legislator has been to simplify VAT obligations for EU e-merchants and to stop abusive practices by non-EU e-merchants. The VAT e-commerce package is step two in EU's digital single market strategy.

The first step entered into force in 2015 and covered telecommunications, broadcasting, and electronic services (TBE services) to consumers, and introduced a Mini One Stop Shop (MOSS) to simplify the VAT compliance process allowing

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[94] European Commission, Directorate-General Taxation and Customs Union, Indirect Taxation and Tax administration, Value Added Tax, Explanatory Notes on VAT e-commerce rules, Council Directive (EU) 2017/2455, Council Directive (EU) 2019/1995, Council Implementing Regulation (EU) 2019/2026. vat-one-stop-shop.ec.europa.eu/system/files/2021-07/vatecommerceexplanatory_notes_28102020_en.pdf/ retrieved May 11, 2023.

[95] Council Implementing Regulation (EU) 2019/2026 of 21 November 2019 amending Implementing Regulation (EU) No 282/2011 as regards supplies of goods or services facilitated by electronic interfaces and the special themes for taxable persons supplying services to non-taxable persons, making distance sales of goods and certain domestic supplies of goods.

taxable persons supplying TBE services to consumers in the EU to declare and pay VAT due in all EU Member States in one single Member State. As stated in subchapter 2.2., VAT is a competence area where Member States have relinquished legislative powers to the EU, and therefore, the public choice roles in the EU have more of a free reign to legislate in order to increase the fees Member States need to pay to the EU, which are in part based on VAT. To most effectively increase the fees, public choice roles have an incentive to make the compliance process more streamlined and less dependent on the Member State tax authorities, explaining the willingness to introduce the MOSS.

Under the second step (the VAT e-commerce package), the MOSS was extended to all cross-border B2C supply of services and cross-border B2C supply of goods. Imports of small consignments also became subject to VAT under these rules, and a new reporting scheme became applicable to VAT due on imported e-commerce goods. According to these rules, taxable persons facilitating supplies through an Electronic Interface (EI), are obligated to collect and pay VAT on certain sales that had previously been unaddressed.

5.6.2. Taxable person as a deemed supplier

Taxable persons who facilitate distance sales of goods through the use of an electronic interface (EI) will be deemed to have received and supplied the goods to the consumers themselves, i.e. they have become a deemed supplier.[96][97][98] As a deemed supplier, the taxable person with the EI is treated for VAT purposes as if that person is the actual supplier of the goods. After the expansion through the e-commerce package, MOSS is now referred to simply as One Stop Shop (OSS). With the introduction of the VAT in the Digital Age (ViDA) proposal, the deemed supplier model is expanding into more scenarios than the goods that the e-

[96] Article 14a of Directive 2006/112/EC

[97] Council Implementing Regulation (EU) 2019/2026 of 21 November 2019 amending Implementing Regulation (EU) No 282/2011 as regards supplies of goods or services facilitated by electronic interfaces and the special themes for taxable persons supplying services to non-taxable persons, making distance sales of goods and certain domestic supplies of goods. p. 2

[98] European Commission (2020), Explanatory Notes on VAT e-commerce rules, p.11

commerce VAT package targeted.[99] Therefore, in scenarios where data is deemed to be supplied by a non-taxable person in a separate supply, rather than as currency constituting part of the consideration paid, the deemed supplier model could employ taxable persons to bring in the VAT revenue to the EU coffers, if the scope of the deemed supplier model would be expanded to other scenarios.

5.6.3. Taxable transactions

The taxable transactions in scope due to the e-commerce VAT rules for a person that facilitates the supply of goods through the use of an EI, such as a marketplace, platform, portal or similar means cover a few situations of sales of goods, while the platform rules from the ViDA package take aim at services as well. According to the European Commission explanatory notes on VAT e-commerce rules, the term ”similar means” is meant to cover any current and future technologies which would allow to conclude the sale electronically.[100] This wide term would therefore also cover Decentralized Autonomous Organizations (DAOs), Initial Coin Offerings (ICO), Non-fungible token (NFT) marketplaces, or whatever the privatize-solution of the day is.

The single supply from the underlying supplier selling goods through an EI to an end consumer (B2C supply) is split into two supplies according to the rules introduced by the e-commerce package[101]:

1. A supply from the underlying supplier to the electronic interface (deemed B2B supply), which is treated as a supply without transport, and is exempt from VAT with the right of deduction for the underlying supplier[102] and
2. A deemed supply from the deemed supplier’s EI to the end consumer, which is also the supply to which the transport is allocated.

[99] Proposal for a Council Implementing Regulation amending Implementing Regulation (EU) No 282/2011 as regards information requirements for certain VAT schemes.

[100] European Commission (2020), Explanatory Notes on VAT e-commerce rules, p.11

[101] European Commission (2020), Explanatory Notes on VAT e-commerce rules, p.13

[102] Articles 136a and 169(b) of the VAT Directive

5.6.4. Electronic interface (EI)

In terms of the VAT e-commerce package, an EI shall be interpreted as a broad concept which allows two independent systems or a system and the end user to communicate with the help of a device or a program. An EI could encompass a website, portal, gateway, marketplace, application program interface (API). With the definition of the EI being broad, the determining question for whether or not the new rules apply, is if the EI is facilitating supplies. The assessment on facilitation is made for each transaction, leading to an EI potentially having a mixed business from a VAT perspective, e.g. when facilitating both the supply of imported low value goods and goods in general.

An EI is considered to be facilitating a supply if the supply between the seller and the purchaser is concluded on the EI. Facilitation includes situations where customers initiate the purchase process or make an offer for purchasing goods and underlying suppliers accept the offer via the EI. Generally, for e-commerce transactions this is reflected in the actual ordering and the checkout process being carried out by or with the help of the electronic interface. On the other hand, if the EI does not set any of the terms and conditions under which the supply of goods is made, is not involved in authorizing the charge to the customer's payment made, and is not involved in the ordering or delivery of the goods, the EI is not considered to be facilitating the supply.

An EI that is merely processing payments related to a supply, such as a Bitcoin wallet, is not considered to be facilitating the supply based on the rules introduced by the e-commerce VAT package. The same applies for EI's that only lists or advertise goods, or redirect customers to other EI's where goods are offered for sale. In such situations the supply is deemed to be materialized between the supplier and the customer, independently. In cases where the EI doesn't have knowledge of if and when a transaction is concluded, where the goods are located, or where the goods are transported to, the EI is not able to fulfill the VAT obligations as a deemed supplier.

In any one transaction, there can only be one EI that is the deemed supplier, i.e. the EI where the order is taken and through which the supply is concluded. Any

other EI in the supply chain makes a B2B supply to the underlying supplier or to the deemed supplier.

5.6.5. Invoicing, collection, reporting, and remittance of VAT for an EI

The deemed supplier will be treated like the actual supplier of goods made towards the customer for VAT purposes, including the taking on of the obligations of invoicing, collecting, reporting, and remittance of VAT. A member state can, however, introduce national measures providing for joint and several liability of the underlying supplier. The deemed supplier must therefore have knowledge of the applicable VAT rate for the specific item in the relevant Member State.

If the EI does not use any of the OSS or IOSS the form and extent of the records will be determined by the national legislation of each Member State. If the EI uses the OSS or IOSS, the form and extent of the record is regulated in VAT directive (10 years).

5.6.6. Limited Liability of an EI

An EI that is treated as a deemed supplier will have an obligation to gather information about transactions in order to fulfill its VAT obligations. Since the EI is typically not in possession of the goods, or involved in the transfer of the ownership between the underlying supplier and customer, the EI will often relay the information received from the underlying supplier to fulfill its VAT obligations. In order not to impose a disproportional burden on the EI, limited liability can apply, so that the EI will not be responsible for the underreporting of VAT including related penalties and interest.[103]

If the deemed supplier's liability is limited, the liability of the underlying supplier can be invoked, if the Member State has introduced national measures providing for joint and several liability. The EI must prove that the conditions for limited

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[103] Limited liability applies when:

1. The deemed supplier is dependent on information by suppliers selling goods through the EI in order to correctly declare and pay VAT on those supplies;
2. The information provided from the suppliers of goods is erroneous; and
3. The deemed supplier can demonstrate that it did not, and could not reasonably know, that the information received was incorrect.

liability are met. In the explanatory notes the EU commission has stated that the EI should make the underlying supplier aware of the importance of providing all relevant information and, if the underlying supplier persistently fails to provide the necessary information, the EI should take appropriate action.

5.7. Amending Directives for EU VAT: *VAT in the Digital Age*

The VAT in the Digital Age (ViDA) proposal has three main objectives. The package aims to modernize VAT reporting obligations, address the challenges of the platform economy, and avoid the need for multiple VAT registrations in the EU.[104]

To accomplish these aims, the initiative introduces standardized Digital Reporting Requirements, imposing the use of e-invoicing for cross-border transactions. It further introduces the deemed supplier model to the passenger transport and short-term accommodation services provided through platforms,[105] essentially transforming the platforms (e.g. Uber and Airbnb) into government mandated goons in collecting extortion fees from hosts and drivers. Finally, it introduces a Single VAT Registration (SVR), improving and expanding on the existing OSS, IOSS, and reverse charge mechanism.

Building on the model for e-commerce goods, the deemed supplier model states that the platform is deemed to have itself received and supplied the service provided by the underlying supplier. In essence, the supply is split into two: first, an exempt supply from the underlying provider with the right to deduction,[106] and second, a taxable supply from the platform to the consumer.[107] Similarly, the Implementing Regulation provides the definition of ”facilitates”, which follows the same for e-commerce. Further, the facilitation service follows the place of

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[104] European Commission, Proposal for a Council Implementing Regulation amending Implementing Regulation (EU) No 282/2011 as regards information requirements for certain VAT schemes, COM/2022/704 final, eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52022PC0704 retrieved on May 11, 2023.

[105] Article 28a of the VAT Directive

[106] Article 136(b) of the VAT Directive

[107] Article 136(b) of the VAT Directive

supply rules of the underlying supply,[108] and as the rental of up to 45 days is considered similar in nature to the hotel sector, the exemption for leasing and letting immovable property does not apply.[109]

A particular challenge of the deemed supplier model is that the data reported for the Central Electronic System of Payment information (CESOP) identifies the individual payees (i.e. sellers) while the tax authorities need to know the taxable persons that will actually receive the payment. To alleviate this problem, the transmission of the underlying supplier's identification information from the platforms is required.

5.8. EU mandating transaction reporting

5.8.1. Introduction

The EU has introduced several amendments to Directives increasing demands of information reporting on transactions of various kinds, with the common denominator of these initiatives being that they all target the digital economy. While the ruling on Hedqvist made it clear that Bitcoin transactions are not taxable from a VAT-perspective, the EU has leveraged the VAT system for implementing transaction reporting. On the other hand, directives outside of the VAT will have the impact of inching closer to implementing a total control system that could empower more efficient enforcement of VAT on barter transactions, where the VAT gap has been more prominent.

5.8.2. Central Electronic System of Payment information (CESOP)

In Council Directive (EU) 2020/284 amending the VAT Directive introducing certain requirements for payment service providers (PSPs),[110] evasion of VAT obligations by businesses carrying on cross-border e-commerce was presented as a reason to introduce detailed information reporting requirements on payment service providers about the payers and payees in any particular transaction, in

[108] Article 46a of the VAT Directive

[109] Article 135(1)(I) of the VAT Directive.

[110] Council Directive (EU) 2020/284 of 18 February 2020 amending Directive 2006/112/EC as regards introducing certain requirements for payment service providers

order to help the tax authorities detect and combat cross-border VAT fraud. The reportable information includes the location of the payer, without prejudice to the rules laid down in the VAT Directive and Implementing Regulation as regards the place of a taxable transaction.

If PSPs approach CESOP similarly to suspicious activity reports, it is likely that they will overreport all transactions, rather than risk not reporting the required transactions. In effect, CESOP may be used for all transactions and not only cross-border transactions, and PSPs may be more inclined to support an expansion of the scope to all payments, in order to remove the judgment call on whether or not a particular transaction falls within the scope of CESOP.

5.8.3. Automatic Exchange of Information for Digital Platform Operators (DAC7)

In March 2021, the European Council adopted the DAC7 amendment, under which digital platforms that allow taxpayers to sell goods, offer online and offline personal services, or rent out immovable property or means of transport have to report those taxpayers and their economic activities.[111] Initially the proposal also included investment- and lending-based crowdfunding platforms, but were removed from the scope before DAC7 was adopted. This comes to show the intent, however, of expanding the scope of the information reporting. The ViDA initiative subsequently introduced the deemed supplier model in order to more efficiently enforce the value added taxation of the transactions of the platform economy, e.g. Airbnb and Uber. This further shows that the information reporting requirements often are followed by additional tax enforcement.

[111] Council Directive (EU) 2021/514 of 22 March 2021 amending Directive 2011/16/EU on administrative cooperation in the field of taxation, eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021L0514 retrieved May 18, 2023.

5.8.4. Tax transparency rules for crypto-asset transactions (DAC8)

On May 16, 2023, the EU finance ministers agreed[112] on new rules on markets in crypto-assets (MiCA),[113] including an amendment to the EU Directive on Administrative Cooperation (DAC), which will require crypto-asset service providers to report transactions of their EU clients to tax authorities from 2026.[114] The DAC doesn't deal with taxes itself, but rather the collection and exchange of tax-related information.[115]

An amendment proposed to Article 16(2) of the DAC clarifies that the information exchanged can be used for purposes other than tax, including any measures covered under Article 215 TFEU, which deals with the imposition of economic sanctions by the EU on other countries. The European Commission states that the amendment is required to allow "necessary action to enforce sanctions against Russia," and further that data under DAC "could be used to check whether an entity is circumventing or violating the sanctions imposed on Russia".[116] This orchestration of conflict is leading to amended laws and regulations that in the future can be used as enforcement against any and all jurisdictions, for any reason, including one that prevents any individual from buying or selling unless deemed acceptable by the enforcers of that system.[117]

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[112] Council of the EU Press release (May 16, 2023) Digital finance; Council adopts new rules on markets in crypto-assets (MiCA), consilium.europa.eu/en/press/press-releases/2023/05/16/digital-finance-council-adopts-new-rules-on-markets-in-crypto-assets-mica/

[113] Regulation of the European Parliament and of the Council on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937, data.consilium.europa.eu/doc/dodcument/PE-54-2022-INIT/en/pdf retrieved on May 18, 2023.

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[115] European Parliamentary Research Service (2023), Briefing - EU Legislation in Progress, Tax transparency rules for crypto-asset transactions (DAC8), europarl.europa.eu/RegData/etudes/BRIE/2023/739310/EPRS_BRI(2023)739310_EN.pdf, retrieved on May 18, 2023.

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[117] "Also it forces everyone - great and small, rich and poor, free and slave - to receive a mark on his right hand or on his forehead preventing anyone from buying or selling unless he has the mark, that is, the name of the beast or the number of its name. This is where wisdom is needed; those who understand should count the number of the beast, for it is the number of a person, and its number is 666."

David H. Stern (2016), *The Complete Jewish Study Bible*, Revelation 13:16-18 p.1798, Hendrickson Publishers Marketing LLC, Peabody, MA.

These amendments ensure the future enforcement can be demanded through ”reportable crypto-asset service providers” (RCASPs) covered by DAC8.

The amendment also includes the addition of e-money, e-money tokens, and central bank digital currencies (CBDCs) into the DAC2, which only requires the reporting of balances, rather than individual transactions, as does the DAC8.[118] Preferential treatment is therefore given to CBDCs, in an effort to nudge individuals and entities to the use of these fiat scams.

[118] European Parliamentary Research Service (2023), Briefing - EU Legislation in Progress, Tax transparency rules for crypto-asset transactions (DAC8), europarl.europa.eu/RegData/etudes/BRIE/2023/739310/EPRS_BRI(2023)739310_EN.pdf, retrieved on May 18, 2023.

6. Examples, summary, and conclusion

6.1. Case study of CO_2 tracker

Since the public choice roles in the EU and the US seem to be determined to introduce a carbon emissions component in a social credit system for total control, as a case study, consider a situation where a (financial services) business is providing data on consumer purchases to a third party it is relying on to process that data in order to calculate the CO_2 emissions on goods and services the consumers' financial transactions related to.[119] In this example, the resulting emissions figures are then used by the business to inform the consumers about the emissions from their purchase behavior.

Although there are differing scientific conclusions on whether or not there is a benefit or harm in CO_2 emissions, and the extent to which human activity is contributing to it,[120] value can be assigned to the supply of CO_2 footprint information, which, in the absence of an exemption, is VAT-taxable when supplied for consideration. Transactions of technical or administrative nature, even when related to a financial service, are taxable,[121] so even in the potential case where the CO_2 emissions data based on consumer purchases is supplied in relation to financial services, the financial services exemption would not apply.[122]

However, if the CO_2 emissions data becomes part of the granting and the negotiating of credit by the person granting it, as might be deemed to be the case in a social credit system based on carbon footprint, the exemption in Article

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[119] For an equivalent real life example, see the Klarna Give One initiative at klarna.com/us/blog/carbon-gootprint-tracking-klarna-app/ retrieved May 22, 2023.

[120] Patrick Moore (2021), *Fake Invisible Catastrophies and Threats of Doom,* pp.31-79, EcoSense Environmental Inc, Comox, BC, Canada.

[121] Supreme Administrative Court of Sweden case HFR 2019 ref. 45

[122] Article 135(1) of the VAT Directive

135(1)(b) could be relevant. Therefore, an incentive exists for PSPs to include CO_2 emissions data in credit assessments, as it then escapes VAT to be applied.

To underline, it is the nature of the transaction, rather than the data itself, that determines the VAT taxability of the transaction. Taxing data as currency regardless of the nature of the transaction would therefore derail the legislative intent of the exemption, and of the foundation of the VAT system as a whole.

On a first glance, and based on current law, the service of processing the data, supplied by the third party, is a single taxable supply. However, if the provision of the data to the third party includes the potential for further use of that data for other purposes by that third party, there is an additional part in a composite supply, the market value of which needs to be taxed. Further, if the consumer is receiving an additional benefit, such as a rebate, for providing access to the purchase data, then the transaction should potentially be treated as consideration paid by a third party, as was the case in Elida Gibbs, where the consideration did not come in the form of a price discount or rebate as in the case of Boots, but as consideration paid by a third party, as Gibbs was seen to be stepping into the shoes of the consumer and paying a part of the total consideration.

6.2. Case study of social media platforms

Recalling back to mind the common pool resource framework by Ostrom, based on which large global tech-companies can be seen as free-riding on the common pool resource of individual data in order to supply marketing services, although the reality is that personal data is almost freely available, and it can therefore be argued that the use should rather be characterized as that of open-access resources.[123]

Nevertheless, the data as currency argument in favor of taxing the data consumers supply is that there is a barter transaction present when consumers receive the benefit of the social media platform in exchange for personal data supplied, which is in turn used by the platform in marketing services. The current VAT law is

[123] Elinor Ostrom (1990), *Governing the Commons: The Evolution of Institutions for Collective Action*, p.23, Cambridge University Press, New York, NY.

sufficient to tax the transaction in principle, but the transaction goes untaxed due to the users not being a taxable person.

Anticipating an expansion to the scope of the e-commerce and ViDA platform rules, even if consumers, being non-taxable persons, were to be seen as making an underlying supply of data, the amounts would be taxed with the platform stepping into the role of taxable person to the supply. However, little impact would come from this change, since this taxed value would be claimed back as input VAT form the taxable transaction related to advertising, although the place of supply rules will also need to be considered, with a cross-border offering leading to a VAT impact.

The now all but forgotten Facebook Libra (later, Diem) project is interesting as a case study, having two legs to it. In part, it is a permissioned blockchain-currency, for which the corporation Meta created the Libra Association, a membership organization for the companies within the areas of payments, technology, online marketplace, and so on, which is granting access to the currency. The second leg, on the other hand, was the digital wallet, which is tightly controlled by Meta, as it is core to controlling payments.

7. Summary and conclusion

This paper has shown that it is not the use of data as currency, and the VAT treatment of data that is problematic, since the VAT law as written and amended is sufficient to tax transactions with data. Rather, it is the common-pool resource of any currency that has lead to problematic outcomes, which, having been solved through an Ostrom-approach from the grass roots in the form of the sound money of Bitcoin, has given multitudes of people hope.

As an example, the programmable money that Bitcoin is, it is the programming of the money that could lead to the voucher treatment of a transaction, either as a single purpose voucher, or a multi-purpose voucher.

Although Bitcoin is the most fair money in existence, the outlook is detrimental when combined with a total-control society enforced from the outside of the Bitcoin network, likely on the second or third layer. In order to maintain control, ViDA and CESOP are put in place in order to enforce a system of total control. The social credit score is taking over more of the unit of account aspect of money, while Bitcoin can still hold on to the store of value aspect. On the third layer will be for example Strike, the Coinbase app, Square's Cash app, Apple Pay, Facebook Libra, Twitter's digital payments, as well as the commercial banks' inevitable cryptocurrency wallet apps, through which the enforcement of the total control network is possible.

In this small window of liberty, while the surveillance system is being built auspiciously to combat VAT fraud and for CBDC's, and before it is morphed into a system engulfing Bitcoin, I call for the Bitcoin remnant to prepare!

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