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NEW TECHNOLOGIES AND TAX LAW

SUMMARY: 1. Introduction. Digital Law, AI Law, and Blockchain: does it matter? – 2. The role of Tax Law within the “Web 2.0”. – 3. Theoretical and fundamental issues: tax treaties and the concept of permanent establishment. – 4. Cryptocurrencies: what’s next? – 5. Conclusions.

1. Introduction. Digital Law, AI Law, and Blockchain: does it matter?

The term “New Technology Law” has recently been used very frequently and with a wide meaning². However, this expression must be distinguished from other segments of the law. First, “New Technology Law” is distinct from “Digital Law”. Indeed, the French term “*digital*” – which comes from the English word “numerical” – was used in France from the 1970s until the 1990s for designating the law regulating information, transmitted by a sequence of numbers, usually binary (based on 0 and 1). It was then replaced in the 2000s by the term “*numérique*”, although the two terms are not synonymous³. Nevertheless, either the term *digital* or *numérique* is associated with a number of terms identifying the distinctive features

¹ The present contribution provides excerpts from the lecture given in 2019 by Georges Cavalier (University of Lyon, and on leave, 2020, at the University of Ferrara) at the 61st Seminar of Comparative and European Law at the University of Urbino: it is based on the notes and bibliographical apparatus provided by Dr. Rocco Di Nuzzo (University of Urbino). Dr Rocco Di Nuzzo submitted a first draft of this work to Georges Cavalier based on the oral presentation the latter gave. Then, Georges Cavalier re-read this first version and made some modifications. This work is therefore the fruit of collaboration and a common reflection between the two authors.

² “New Technologies” could cover different fields: from Artificial intelligence to Nanotechnology, Robotics, Distributed ledger technologies medical field advancements. Please see the following link for further details on “New Technologies” examples: https://en.wikipedia.org/wiki/Emerging_technologies#Emerging_technology_debates (08-03-2002).

³ See generally: F. ROPART, *Faut-il dire numérique ou digital?*, in <https://www.blogdumoderateur.com/numerique-ou-digital/> (07-03-2020).

of this technology: the transition from analogue to digital information is called “digitization”, while the transition from material technology to digital is commonly called “dematerialization”. In any case, the strength given to individuals is now on the intangible rather than the tangible plane⁴.

However, the terms *digital* and *numérique* are often used indiscriminately in current language and this is due both to a lack of computer culture and probably to a lack of knowledge of the English language as well. An example of a misuse of these terms can be found in the “*Journée de la femme digitale*”⁵. Moreover, it would also be useful to remember that on a semantic level the term digital in both French and English languages takes its origin from the Latin word “*digitum*” meaning finger: therefore, it is quite clear that the origin of the word has nothing to do with numbers or digitization, but rather with the activity of “counting with fingers”.

As regards, instead, the difference between digital and analogue technology, it should be stressed here that it concerns the way in which signals – mainly sound signals – are processed and stored. For example, if in the case of digital technology a sound signal is converted into a binary system (base 0 and 1), in analog technology this signal keeps its sound character in its uncoded form.

New Technology Law has also to be distinguished from Artificial Intelligence (AI) Law⁶. Focusing on AI, its very fabrics is made of basically two elements – hardware and software – both constituting the “body”, and the “mind” effectively making machines alike humans. Several cases implement AI in working or private environments: for instance, in healthcare sector the machine is able to identify the symptoms or signs and consequently to deduce diseases in order to find a suitable treatment. Other examples could cover sectors as financial services (Fintech)⁷, where the machine detects and collects data derived from the Stock Exchange for the purpose of establishing appropriate investment strategies. Or in the automotive sector, where AI enables the vehicle to know and respect the highway code as well as to adapt the driving according any situation or media as well. In the former

⁴ J. RIFKIN, *La troisième révolution industrielle*, Actes sud, 2013; contra D. BOURG et alii, *La Troisième Révolution of Rifkin shall not arise*, in *Liberation.fr* du Oct. 21 2014.

⁵ Please see the following link: <https://lajourneedelafemmedigitale.fr/>; (26-02-2020).

⁶ S. MERABET, *Vers un droit de l'intelligence artificielle*, PhD Aix-Marseille, 2018.

⁷ For further information about Fintech please see: M.T. PARACAMPO, *Fintech Introduzione ai profili giuridici di un mercato unico tecnologico dei servizi finanziari*, Volume II, Torino 2019.

case, the machine works as journalist and writes a press article from the raw data communicated to it. In the latter case, the machine works as a driver in interpreting road signals.

The most important AI feature – distinguishing it from simple New Technology – is probably its capacity of “understanding”: the machine is able to identify and understand not only binary language, but also especially human language either written or oral. This means that the machine does not need any external instruction from hardware but it can solve the problem by itself. Some examples could be virtual assistants or web search engine. Furthermore, the capacity of “understanding” by AI could also be declined into its capacity of “learning”: this is called “machine learning”. It is interesting to report here in which way academics and professionals in AI sector have considered AI at the “Dartmouth Conference”⁸ – the so-called AI’s birthday. This conference is the moment from which AI is officially considered as a scientific discipline. On this occasion, researchers have defined the objective that AI must achieve: give machines cognitive abilities comparable to those of humans.

In case of machines would be assimilated to humans thanks to AI, there could be consequences from a legal point of view insofar every time a machine makes a human activity it will be subject to interactions with others (especially humans) and, as a consequence, there could take place facts or acts relevant for the law. In fact, concepts as asset or legal entity/personality or fraudulent misrepresentation could definitely not be tailored on machines. In light of this fact, tax law – which uses the old principles yet – and its principles also are suffering before the incoming AI.

Leaving aside AI⁹, one example of new technology is surely *Blockchain*¹⁰. It is “*a transparent, secure information storage and transmission technology that operates without a central control body*”¹¹. Blockchain could also be de-

⁸ For further information about Dartmouth workshop please see: https://en.wikipedia.org/wiki/Dartmouth_workshop; (26-02-2020).

⁹ See B. KUZNIACKI, *Developing an Artificial Intelligence’s Tax Assistant in International Tax Avoidance Cases: The Case Study under the PPT*, available at https://www.taxacademy.sg/files/research%20papers/KuzniackiB_AI%20Tax%20Avoidance%20PPT.pdf (07/03/2020).

¹⁰ For those interested in Blockchain please see: M. T. PARACAMPO, *Fintech Introduzione* cit., p. 309 ss.

¹¹ Please be advised that definition of Blockchain comes from official website Blockchain France: <https://blockchainfrance.net/decouvrir-la-blockchain/c-est-quoi-la-blockchain/> (26-02-2020).

defined as “an open, distributed ledger that can record transaction between two parties efficiently and in a verifiable and permanent way”¹².

There are different kinds of blockchain either public – where everybody is entitled to join the “chain” – or private – where just selected persons can join and use the ledger. Is this distinction relevant for tax purposes? Probably, since the role of tax law within the Web 2.0 has to be redefined.

2. The role of Tax Law within the “Web 2.0”.

Before deepening into some tax aspects, one could start as a reminder with the following basic tax equations:

Tax Computation = [(*Tax Base* × *Tax Rate*) – *Tax Credit/Reduction*], and
Tax Base = [*Income* – *Tax Deductible Expenses*].

To determine the exact amount of income tax owed (i.e. tax computation), the amount of taxable income (tax base) is multiplied by one or several tax rates (according to tax rates charts).

One of the main problem raised by new technology is the tax base or tax allocation¹³. This is particularly true when examining the role of tax law within the “Web 2.0”. This “Web 2.0” – also called “participative web” considers “the set of techniques, functionalities and uses that followed the original form of the web, characterized by more simplicity and interactivity”. The so-called “Web 2.0” concerns interfaces and exchanges that enable internet users with little technical knowledge to take advantage of new web functionalities. Dale Dougherty, a professional of the company O’Reilly Media, used the expression of “Web 2.0” for the first time in 2003 and then diffused it in 2004 and 2005, until his position was consolidated in 2007 with “What is Web 2.0”.

The philosophy¹⁴ behind the concept of “Web 2.0” is simple and based on the following characteristics: *i*) the web is considered as a platform; *ii*) the

¹² Please see the following link: https://en.wikipedia.org/wiki/Blockchain#cite_note-hbr201701-7 (26-02-2020).

¹³ See generally, OECD, *Addressing the Tax Challenges in a Digital Economy*, 2014, available at [https://www.oecd-ilibrary.org/docserver/9789264218789en.pdf?expires=1583610485&id=id&accname=guest&checksum=E6532CE2DA87354B5B25D249094CC18B](https://www.oecd-ilibrary.org/docserver/9789264218789en.pdf?expires=1583610485&id=id&accname=guest&checksum=E6532CE2DA87354B5B25D249094CC18B;); (07/03/2020).

¹⁴ For more information about the philosophy and New Technology please see: E. CALZOLAI, *La Decisione nel Prisma dell’Intelligenza Artificiale*, Milano 2020; C. FARALLI, *Diritto, diritti e nuove tecnologie*, Napoli 2018; R. BRIGHI S. ZULLO, *Filosofia del diritto e nuove tecnologie*, Roma 2015.

internet user is a co-developer of applications; *iii*) the wealth is data; *iv*) the web 2.0 supports the collective intelligence; *v*) it is necessary to have flexible and light interfaces; *vi*) the software is liberated from personal computer¹⁵. This philosophy has to be combined with the following general tax principles.

In his major work “An Inquiry into the Nature and Causes of the Wealth of Nations”, Adam Smith fixed the principle that “*Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it*”¹⁶. From this principle arises any recent tax policy founded on the services’ quality and on the way to regulate the relationships between tax authorities and taxpayers. The second principle, stated by article 13 of Declaration of the Rights of Man and of the Citizen dated August 26, 1789, clearly indicates that “*For the maintenance of the public force, and for administrative expenses, a general tax is indispensable; it must be equally distributed among all citizens, in proportion to their ability to pay*”¹⁷. This principle fixes the strategies against fraud and in order to detect the fraud, it is used new technology as data mining. Data mining could be defined as the analysis of data made by different perspectives in order to transform them into useful information, either establishing relations among data or identifying patterns. The Data mining process may be particularly useful for companies insofar they could take advantage from such information for implementing marketing strategies for instance. The business use of such information is important as it may grant companies increasing their turnover or reducing their costs. Applied in tax law, the French Constitutional Council approved a controversial new law that allows tax authorities to use social media data to catch tax cheats¹⁸.

¹⁵ For further information on this point please see: F. DOUET, *Fiscalité 2.0 – Fiscalité du numérique*, 2019; F. HUET, *La fiscalité du commerce électronique*, 2000. Please also see the 2015 Final Report of OECD (Organization for economic Co-operation and development) “Addressing the Tax Challenges of the Digital Economy, Action 1”, available at https://read.oecd-ilibrary.org/taxation/addressing-the-tax-challenges-of-the-digital-economy-action-1-2015-final-report_9789264241046-en#page1 (7-3-2020).

¹⁶ A. SMITH, *An Inquiry into the nature and causes of the Wealth of Nations*, Part III, 2007, p. 640. Please see the following link: https://www.ibiblio.org/ml/libri/s/SmithA_WealthNations_p.pdf (8-03-2020).

¹⁷ For the French version please see: <https://www.conseil-constitutionnel.fr/le-bloc-de-constitutionnalite/declaration-des-droits-de-l-homme-et-du-citoyen-de-1789> (26-2-2020); for the English version please also see: https://www.conseil-constitutionnel.fr/sites/default/files/as/root/bank_mm/anglais/cst2.pdf (26-2-2020).

¹⁸ DC, Dec. 27, 2019.

There are several interesting examples of computer programs with algorithms applied to legal industry, for example Blue J legal¹⁹ with regard to so-called “case law analytics” that is a predictive justice software that is able “to predict how a court would rule in your unique scenario with over 90% accuracy”²⁰. And for a long time now, algorithms have been used for the network analysis of bilateral tax treaties²¹.

This kind of approach is completely disrupting the way of how to intend the law and with regard to tax law there is an issue concerning tax basis linked to both tax administration and taxpayer and this issue has a strong comparative and European accents. The new technologies of the 21st century are significantly changing the way the rules are designed: whether online platforms, virtual currencies, and more generally, taxation of digital sector’s companies, tax law is out to the test. In light of this fact, the majority of European tax laws are tailored for tax issues of 20th century (the so-called Fordist period). These traditional concepts have to evolve. This is true for direct tax (e.g. the concept of permanent establishment to allocate taxing rights), but also for indirect tax (e.g. Value Added Tax).

3. Theoretical and fundamental issues: tax treaties and the concept of permanent establishment.

With regard to theoretical and fundamental issues one could consider the one allocating the profits through the definition of permanent establishment. On October 8, 2015 the final report on BEPS Action 7 aimed at “Preventing the Artificial Avoidance of Permanent Establishment Status” was approved jointly by the OECD and G20. The objective of this report is to ensure that the international tax system does not allow for double taxation and to avoid double non-taxation (the so-called “stateless income”). The fundamental problem of this matter concerns the inadequacy of the 21st century economy in the face of the concept of a permanent establishment. Indeed, the OECD and UN model conventions (in particular article 5) define the permanent establishment as “a *fixed* [emphasis added] place of business through which the business of an enterprise is wholly or partly carried on”. This is surely a key

¹⁹ For further information, see <https://www.bluejlegal.com/> (26-2-2020).

²⁰ *Ibidem*.

²¹ E.g. S. POLAX, *Algorithms for the Network Analysis of Bilateral Tax Treaties*, Master thesis, University of Amsterdam 2014.

point for international taxation insofar its aim is to delimit the fiscal sovereignty of a State and, at the same time, the sharing of a taxation of the profits that a company makes under several jurisdictions.

These international conventions within the definition of a permanent establishment usually distinguish a “general part” (please see the above-mentioned definition) and, then, a series of cases where the existence of a permanent establishment can be established and, finally, a series of exceptions to cases where the existence of a permanent establishment can be established. For instance, exceptions are the so-called preparatory and auxiliary activities or independent agents who cannot conclude contracts²². The leading players of new economy – the web giants above all – have interpreted extensively the exceptions contained in the definition of permanent establishment and, specifically, those relating to auxiliary or preparatory activities and those relating to the presence of stocks.

The OECD identifies several practices implemented by multinationals to take advantage of certain flaws in the system. For example, abuses may consist in the fact that a company through commissions agreements sells goods or services in another country without bearing the local tax on its profits made abroad. In fact, only the commission due to the commissioner is taxable locally in order to remunerate him for negotiating contracts, but this commission is considerably lower than the profits it makes locally²³. Other abusive practices also involve companies that fragment their activities between different entities, which are separated and, as a consequence,

²² According to the model prevailing nowadays, a company is considered as *not* having a permanent establishment in another country if: (a) it uses facilities for the sole purpose of storing, displaying or delivering goods belonging to the company; (b) the goods belonging to the company are stored for the sole purpose of storage, display or delivery; (c) the goods belonging to the undertaking are stored for the sole purpose of processing by another undertaking; (d) a fixed business installation is used for the sole purpose of purchasing goods or gathering information for the undertaking; (e) a fixed business establishment is used solely for the purposes of carrying out any other preparatory or ancillary activities for the undertaking; (f) a fixed business establishment shall be used solely for the purposes of the simultaneous pursuit of the activities referred to the above (a) to (e), provided that the activity of the fixed business establishment resulting from such simultaneous pursuit remains preparatory or ancillary.

²³ See also Google case, Administrative court of appeal of Paris, Apr. 25, 2019. With regard to this latter, it should be noted that these independent agents can be considered as permanent establishment of a company if they have in another state the powers to conclude contracts in name and on behalf of the company.

do not constitute a permanent establishment because of their ancillary nature. This is particularly the case for Amazon, which is a Luxembourgish company which solely storing goods in France or Italy²⁴. But, these activities, if considered collectively, fully meet the definition of permanent establishment. In order to stifle these abusive practices, action 7 of BEPS proposes to amend article 5 of the OECD model, which specifically deals with the definition of permanent establishment.

From this point of view, action 7 of BEPS intends to revise the concept of permanent establishment in two directions: by broadening the definition of permanent establishment on the one hand and, on the other hand, by restricting the use of exceptions. The expansion of the concept of permanent establishment is made, negatively, by restricting the notion of independent agent and, positively, by expanding the notion of dependent agent. Moreover, as concerns the restriction of the recourse to exceptions, reference is mainly made to the so-called preparatory or auxiliary activities. The conditions of a preparatory or ancillary nature to all the activities in Article 5(4) are generalized. Therefore, an activity is no longer auxiliary or preparatory in nature. It is ancillary and preparatory to a value chain of a given group of undertakings. For instance, a company which carries out an activity of distributing goods and which, for that reason, has stocks and premises to store them, will constitute a permanent establishment. It will no longer be able to benefit from the exemption of ancillary and preparatory activities. Therefore, under this new rule, actors in the digital economy will be considered as having a permanent establishment in countries where they have storage or distribution sites (e.g. Amazon). In addition, the misuse of exceptions is also prevented through an anti-fragmentation clause. This latter provides that the exceptions in article 5(4) are not applicable to undertakings which take advantage of them to carry out complementary activities on different sites which, when separate, do not constitute a permanent establishment but which, when taken together, constitute one in so far they form part of a coherent business operation.

The aim of restricting the possibility of dividing the contracts of the yards

²⁴ Italy introduced a new Web Tax with effect from January 1, 2020 (*Imposta sui servizi digitali - DST*) thanks to budget law for 2020. The legislator's objective is to tax revenues generated from digital services provided to users located in Italy, identified by reference to the Internet protocol (IP) address of the device used or other geo-location system. In France, see G. CAVALIER, *Taxe GAFAs et services financiers: l'exclusion?*, in *Revue internationale des services financiers*, 2019/3, p. 3 s.

is to put an end to techniques that seek to divide contracts in order to entrust the yards to different interveners and avoid the qualification of a permanent establishment. Another initiative to address the permanent establishment definition is the tentative of the European Parliament to introduce in the draft CCTB the concept of “*significant digital presence*”²⁵. And even more recently, the OECD proposed a nexus approach to tax profits, and this would not be limited to the digital economy²⁶; one could ask whether the future development is that of a new taxing right for the benefit of market jurisdictions? This direct tax impact of new technologies also finds some echo in indirect tax – particularly VAT – through the example of Cryptocurrency.

4. Cryptocurrency: what’s next?

Without prejudice to what said above with regard to Blockchain definition²⁷, this section would like to deepen its understanding in order to analyse tax issues related to Blockchain and its mechanism: bitcoin and cryptocurrency. Therefore, provided that Blockchain was invented by a person or a group of people unknown using the name Satoshi Nakamoto in 2008 to serve as the public transaction ledger of the cryptocurrency, one could say that Blockchain is a growing list of records, called blocks, that are linked using cryptography and that each block contains a cryptographic hash of the previous block, a timestamp, and transaction data²⁸.

Basically, for use as a distributed ledger, a blockchain is typically managed by a peer-to-peer network collectively adhering to a protocol for inter-node communication and validating new blocks. Once recorded, the data in any given block cannot be altered retroactively without alteration

²⁵ E.g. draft CCTB (Common Corporate Tax Base) at the following link: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2017/595907/EPRS_BRI\(2017\)595907_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2017/595907/EPRS_BRI(2017)595907_EN.pdf) (13-3-2020). For further details on significant digital presence please see the following link: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/623571/EPRS_BRI\(2018\)623571_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/623571/EPRS_BRI(2018)623571_EN.pdf) (13-3-2020).

²⁶ OECD Secretariat proposal: *For a unified approach under pillar one*, available at <https://www.oecd.org/tax/beps/public-consultation-document-secretariat-proposal-unified-approach-pillar-one.pdf>

²⁷ See fn 5 and 6.

²⁸ O. DE MAISON ROUGE, *Blockchain et monnaie électronique: de la confiance numérique à la prise en compte des cyberrisques*. For further information please see the following link: <https://www.workshop.revue-banque.fr/wp-content/uploads/2019/06/Quelle-finance-en-2030-40-points-de-vue-d%E2%80%99experts-Pierre-Henri-Cassou.pdf> (12-3-2020).

of all subsequent blocks, which requires consensus of the network majority. Although blockchain records are not unalterable, blockchain may be considered secure by design and exemplify a distributed computing system with high Byzantine fault tolerance. Decentralized consensus has therefore been claimed with a blockchain.

Bitcoin is a cryptocurrency and, as a consequence, it is a decentralized digital currency without a central bank or single administrator that can be sent from user to user on the peer-to-peer bitcoin network without the need for intermediaries. As a technology developed thanks to Blockchain, bitcoin's transactions are verified by network nodes through cryptography and recorded in a public distributed ledger. Bitcoin – as Blockchain as well – was released as open-source software in 2009 and its “units” or “coins” are created as reward for a process known as mining. Note that bitcoins can be exchanged for other currencies, products and services²⁹.

One question arising from cryptocurrencies is the characterization of such currencies and their taxation. Cryptocurrencies are particularly linked with Initial Coin Offerings (hereinafter “ICO”) which is basically an innovative way of raising money. The ICO is “*a fundraising method, operating via the issuance of digital assets, called tokens, against cryptocurrencies in general and during the start-up phase of a project*”³⁰. During an ICO the investor who decided to put money into the start-up project receives a consideration in form of cryptocurrency called “token”. One could distinguish two families of tokens: “native token” and token issued on a Blockchain already implemented. Native token relates to protocols having two functions: (i) transfer value between network members and outward through cryptocurrency exchanges and (ii) provision of a decentralized development environment for application. While, as concerns the second tokens' family, two sub-categories emerge: the “security token” or “equity tokens”, which permit the investors to earn money and carry the right to vote and “utility token”, which grant to their holder a right of use goods or services. This latter is the most common type of token used in practice. Therefore, the relevant tax treatment may be different from country to country. For instance, in

²⁹ A research produced by University of Cambridge estimates that in 2017, there were 2.9 to 5.8 million unique users using a cryptocurrency wallet, most of them using bitcoin. For further information: https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2017-global-cryptocurrency-benchmarking-study.pdf (26-2-2020).

³⁰ G. CAVALIER, P. GUÉDON, *Initial coin offerings and VAT scope – building upon the cryptocurrencies debate*, in *International Journal for Financial Services*, 2018/3, p. 24.

France depending on the characterization of the token issued, dividend or interest characterization or capital gain treatment may be retained or not. In fact, the French Administrative Supreme Court decided that the gains generated by the sale of cryptocurrencies by an individual were to be considered as capital gains resulting from this transfer of “movable property” and, as a consequence of such transfer, the gains are subject in France to a 19% proportional rate plus 17.2% social taxes³¹. However, if there is not harmonization of direct taxation in Europe, the indirect tax (VAT – Value Added Tax) is harmonized with regard to VAT scope and base.

VAT treatment of transactions involving cryptocurrencies has recently been treated by the Hedqvist judgment from the European Court of Justice (ECJ)³². On October 22, 2015 the ECJ delivers its decision in the *Skatteverket v. David Hedqvist* case on the VAT treatment of bitcoin exchange. In this particular case, David Hedqvist, a Swedish national, is considering providing services consisting of the exchange of Swedish krona against bitcoin and vice versa. Prior to commencing such transactions, he asked the Swedish Tax Law Commission if VAT should be paid on the purchase and sale of bitcoin and this latter stated that the transactions carried out by Mr Hedqvist are VAT exempt. But the Swedish tax authority (Skatteverket) appeals against the decision before the Swedish Supreme Administrative Court, arguing that the transactions carried out by Mr Hedqvist do not fall within the VAT Directive exemptions. The ECJ answered firstly that bitcoins are similar as fiat currencies for VAT purposes as they have no other purpose than to be a means of payment as national currencies. Secondly the ECJ also stated that the supply of services consisting of the exchange of traditional currencies for units of bitcoin and vice versa, performed in return for payment of a sum equal to the difference between the price paid by the operator to purchase the currency and the price at which he sells that currency to his clients are VAT exempt transactions. In order to comply with ECJ’s interpretation, the VAT Committee states new guidelines on how the VAT treatment of operations with regard to cryptocurrencies (including but not limited to Bitcoin) could be interpreted. In the first place, in case of exchange of bitcoin for goods and services, one could be consider there are two sub-transactions: one from the bitcoin owners to the service provider

³¹ G. CAVALIER, *Blockchain, bitcoins et droit fiscal: Propositions pour une harmonisation*, in *International Journal for Financial Services*, 2018/2, p. 98

³² EUCJ, *Skatteverket v David Hedqvist*, C-264/14.

and, on the other hand, the sub-transaction from the service provider to the Bitcoin owner. The first sub-transaction is out of VAT scope, while the second sub-transaction is VAT taxable as it is treated as any other supply of goods or services. In the second place, according to the VAT Committee the services supplied by digital wallets are out of scope of VAT, unless the wallet providers ask for payment. In this case the transaction seems to be VAT taxable, even if the VAT Committee estimates it is impossible to determine if such services will fall in the exemption of the article 135 (1)(d) of the VAT directive. In the third place, services related to intermediation supplied by exchange platforms are taxable. Anyway, it is noticeable that if these guidelines are neither enforceable nor mandatory, some countries (i.e. Germany) have aligned their position with the VAT Committee.

As regards ICO, please note that it is very difficult to place an ICO operation in the existing VAT categories. It is worth saying that “*ICOs are an example where technology has outpaced the existing law*”. However, one could expect an ECJ decision elucidating the VAT treatment of ICOs, provided that it is not recommended to adopt a common solution for any and all tokens, as tokens have significant differences³³.

5. Conclusions.

It is clear enough that New Technologies are completely disrupting the way to image the tax legal framework and the transactions in general. Blockchain and bitcoin clearly show the new paradigms affecting old standards. The efforts made by countries in order to fight against corporate tax planning strategies used by multinationals to shift profits from higher tax jurisdictions to lower tax jurisdictions show that New technology changing the world also affect a key principle stated in most of Constitutions of European countries, according to which “*each person shall contribute to public expenditure in accordance with their capability*”³⁴. In an area where assets can be moved easily, it may be expected more collaboration among EU – and non EU countries as well – to foster clear and common rules to treat and tax the income and capital gains resulting from the digital revolution. This may also be just a pretext to rethink globally international taxation for all activities, and not only the ones related to new technology.

³³ G. CAVALIER, P. GUÉDON, *Initial coin offerings* cit.

³⁴ E.g., Italian Constitution, art. 53.