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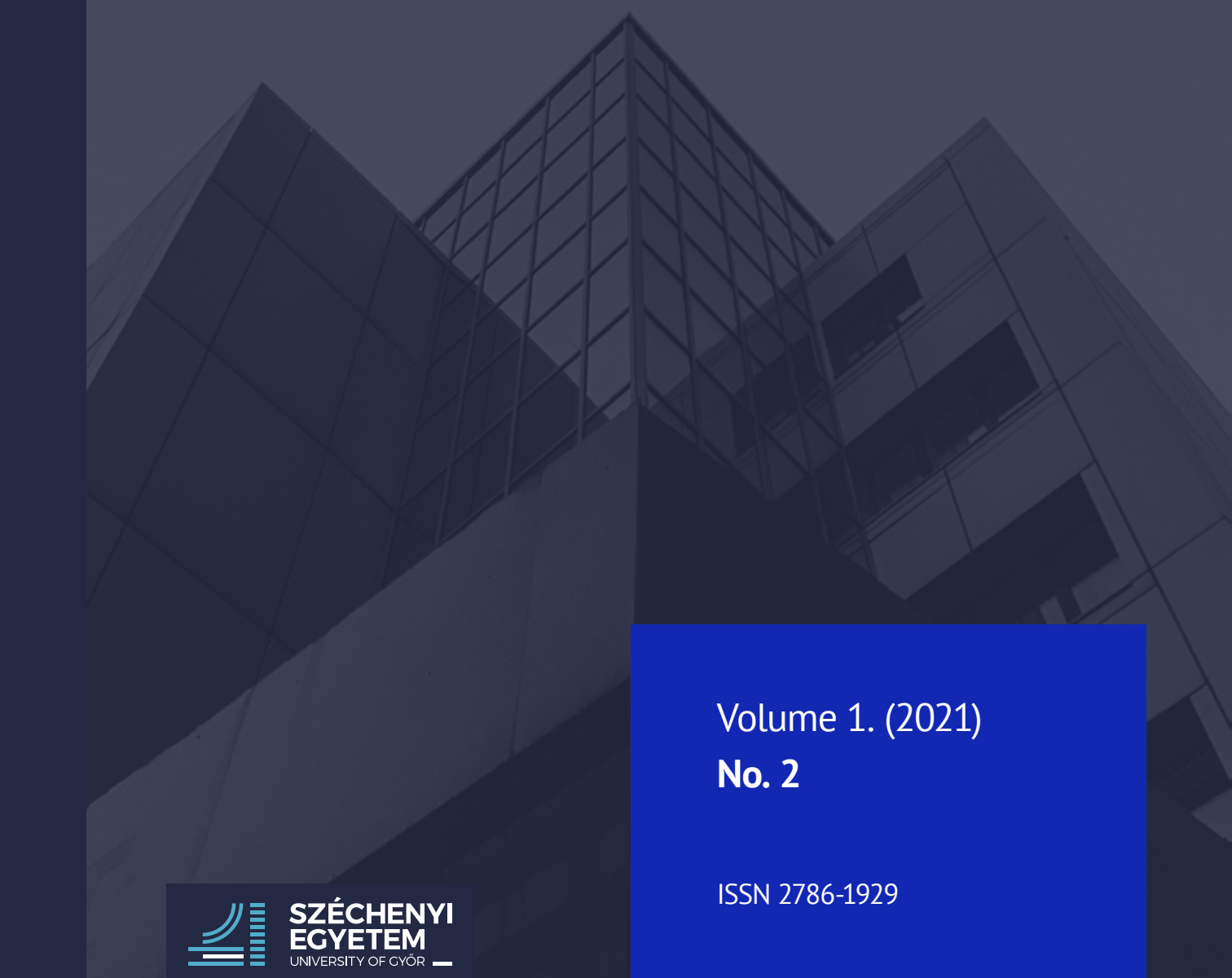

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Defending against crisis measures of Czech government in connection with COVID-19 pandemic

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Abstract: The COVID-19 pandemic required a number of emergency measures in the Czech Republic, which included crisis measures of the Czech government. These measures have often significantly affected a number of constitutionally guaranteed rights and freedoms of individuals and legal entities, who did not always agree with the government measures, especially with their content, scope and duration. The article therefore deals with the basic question of whether these persons (affected by the government crisis measures) can or could defend themselves directly against these measures, and if so, by what legal means and under what conditions? The author also addresses the question of what the legal form of these government crisis measures is. Determining the legal form of a certain activity is the primary precondition for us to be able to correctly determine the appropriate means of defence. Unfortunately, the law does not regulate this subject matter. It is therefore necessary to rely primarily on the findings of legal science and relevant case law (especially of the Constitutional Court of the Czech Republic and the Supreme Administrative Court).

Keywords: state of emergency, pandemic, government, crisis measures, judicial review

1. INTRODUCTION

The ongoing coronavirus SARS-CoV-2 pandemic has significantly changed the Czech Republic and the whole world in the last two years. The pandemic markedly affected both the course of the state and the daily lives of all its inhabitants. Perhaps all areas of life in society and in the state were significantly affected – health care, education, economy, travel, culture, etc. Even for Czech law, the judiciary and public administration, resolving the pandemic was and still is a huge challenge. Resolving situations as serious and extensive as the COVID-19 pandemic is envisaged primarily by the Constitutional Act on the Security of the Czech Republic.[1] Depending on the intensity, territorial scope and nature of the situation, this law makes it possible to declare a state of emergency, a state of threat to the State, or a state of war (see Article 2).[2] It was the *state of emergency* that was declared several times in the Czech Republic[3] in response to the pandemic, as a pandemic represented, in the sense of Article 5 of this Constitutional Act "*another danger which endangers lives and health to a considerable extent*."

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A state of emergency *can be declared by the government of the Czech Republic for a maximum of 30 days*. Reasons must always be given and the territory for which it is declared must be defined (in all cases related to the pandemic, it was the whole of the Czech Republic). At the same time as declaring a state of emergency, the government *must define which rights and to what extent they are restricted, what the obligations are and to what extent they are imposed*. The specific rights that can be restricted by the government (and the obligations imposed) are further regulated by another key law, namely the Crisis Management Act.[4] The government may restrict freedom of movement and residence, the right to do business, the right to assemble, and many others.[5] The government used this power, and in the form of "government crisis measures" really limited a number of rights and freedoms (for example, schools or shops and services were closed, leaving homes was restricted, travel within the Czech Republic and abroad was limited, etc.).

It is clear that a pandemic is an exceptional situation that requires emergency measures. The goal of various interventions and restrictions by the state was primarily to protect the lives and health of the population. On the other hand, the government crisis measures have often significantly affected a number of constitutionally guaranteed rights and freedoms of individuals and legal entities, who did not always agree with the government measures, especially with their content, scope and duration. The basic issue that this article will focus on is therefore whether these natural and legal persons (affected by the government crisis measures) can, or could, defend themselves against these measures directly, and if so, by what legal means and under what conditions? Another related research question will be what the legal form of the government crisis measures is? Determining the legal form of a certain activity is the primary precondition for us to be able to correctly determine the appropriate means of defence. The primary precondition for issuing government crisis measures is, of course, declaring a state of emergency. Therefore, this act will also be analysed in terms of its form and the possibilities of defending against it.

From the point of view of a comprehensive concept, it should be noted that the government and the government crisis measures were not the only significant means that contributed to resolving the pandemic in the Czech Republic. Another important factor, of course, was the Parliament of the Czech Republic, which responded to the situation in the form of laws or their amendments. The Ministry of Health of the Czech Republic and the so-called extraordinary measures issued by it under the Public Health Protection Act[6] also played a significant part in this process. However, given the scope of this article, the author will not focus more on these aspects of pandemic resolution in the Czech Republic.[7]

2. DECLARATION OF A STATE OF EMERGENCY BY THE GOVERNMENT AND THE POSSIBILITIES FOR REVISING THIS ACT

As mentioned above, crisis measures that restrict the rights and freedoms of citizens can only be issued by the government if a so-called state of emergency is properly declared. The government of the Czech Republic has the power to declare a state of emergency (Article 5 of the Constitutional Act on the Security of the Czech Republic). The government declares it in *the form of a government resolution declaring a state of emergency*. The declaration of a state of emergency is connected to the power of the government to restrict the rights and freedoms of citizens or to impose obligations on citizens. We should therefore note the relatively *strong position of the government* in this respect. However, the Constitutional Act on the Security of the Czech Republic seeks to limit this power and at the same time subject it to *control by legislative power* (i.e. by the Assembly of Deputies). The declaration of a state of emergency must be immediately notified by the government to the Assembly of Deputies, which can cancel the state of emer-

gency. The government can only declare a state of emergency for 30 days. The government can extend the state of emergency beyond 30 days only with the consent of the Assembly of Deputies. The law thus provides certain parliamentary control over the government's powers, but it should be pointed out that the government is usually supported by the Assembly of Deputies (it has a decision-making majority there).

The declaration of a state of emergency is a basic precondition for the government to restrict the rights and freedoms of citizens or to impose obligations on them. The practice of the Czech government in this respect was that it always declared a state of emergency in a separate act, and the restriction of rights and freedoms was then the subject of the subsequent crisis measures of the government. Although the government was originally expected to do everything in one act, the Constitutional Court did not find such a government action unconstitutional. In this part of the article, we will therefore focus only on the legal form of the act declaring a state of emergency and the possibility of any subsequent defence against this act. The following part of the article will be devoted to an analysis of the follow-up crisis measures of the government.

If we want to analyse what defence options (especially judicial) can be used in relation to the declaration of a state of emergency by the government, *it is first necessary to determine the legal form of this act*.

There is no doubt that declaring a state of emergency *cannot be considered one of the ways to realise public administration*. In a situation where it declares a state of emergency, the government cannot be considered an administrative body in the sense of the Administrative Procedure Code (Article 1). The government declares a state of emergency on the basis of a constitutional law, and does so within the framework of its executive function, which *is not administrative in nature, but constitutional*.[8] The decision on a state of emergency is not primarily aimed at individual natural or legal persons, as the mere declaration of this state is not a binding act for them that would impose, change or cancel their rights and obligations.[9] Only the specific crisis measures of the government, issued based on the decision to declare a state of emergency, contain enforceable rules of conduct. Therefore, there is no need for any further development of the considerations that this act of government could be an administrative decision, a measure of a general nature or another act under the Administrative Procedure Code.[10] For these reasons, *it is not even possible to consider the option for reviewing this act of government within the administrative judiciary.*

The government's decision on a state of emergency *cannot be considered another legal regulation* within the meaning of Article 87 para. 1 lit. b) of the Constitution of the Czech Republic and Article 64 para. 2 of the Constitutional Court Act.[11] Any acts that are not legal regulations in terms of form (title, procedure), content (do not contain legal norms) or function (do not regulate behaviour) cannot be considered legal acts.[12] The declaration of a state of emergency is an *ad hoc* specific act (decision) – it concerns an individual case of an emergency situation and does not contain any repeatable rule of conduct. The government's decision to declare a state of emergency also has no legal normative content, as a result of which it does not fulfil the function of a legal regulation.[13] It therefore follows that this government act *cannot be reviewed by the Constitutional Court* in the context of proceedings for repealing laws and other legal regulations pursuant to the Constitutional Court Act. V. Sládeček is critical of this view, pointing out that the decision to declare a state of emergency "activates" the application of certain laws and also has direct legal effects on the status of natural and legal persons.[14]

Legal doctrine and case law therefore agree that a government decision to declare a state of emergency *is a specific act applying a constitutional law.*[15] It is *a constitutional "act of governance"* issued in situations where lives and health are at significant risk. It cannot therefore be reviewed within the administrative judiciary and is not subject to control by the Constitutional Court.[16] In other words, the declaration of a state of emergency by the gov-

ernment *is not subject to judicial review*. This act of government *is "reviewable" only by a democratically elected political* ("non-judicial") *body, which is the Assembly of Deputies*. This represents both political and legal control. The Assembly of Deputies may cancel the government's decision to declare a state of emergency (Article 5 of the Constitutional Act on the Security of the Czech Republic). Doctrine and case law find this exclusion of a judicial review constitutionally comfortable.[17] Neither the Constitution of the Czech Republic nor the Constitutional Act on the Security of the Czech Republic provide for a judicial review in this case either.

In one of its judgments, however, the Czech Constitutional Court took its reasoning further, and admitted the possibility of a judicial review (by the Constitutional Court) in exceptional circumstances. The Constitutional Court stated: "*The absence of a judicial review of the declaration of a state of emergency is not absolute and it is possible to imagine the circumstances in which the Constitutional Court itself could (and should) review, especially on the basis of a political minority proposal, whether the state of emergency was correctly declared, whether it had the intended constitutional effects, and subsequently decide on the legality or constitutionality of subsequent implementing acts. (...) The act of declaring a state of emergency could be cancelled by the Constitutional Court if it were in conflict with the basic principles of a democratic state governed by the rule of law and if it meant a change in the essentials of a democratic state governed by the rule of law.*"[18] However, it was a one-off statement that the Constitutional Court did not repeat in other decisions.

3. GOVERNMENT CRISIS MEASURES ADOPTED IN A STATE OF EMERGENCY AND THE POSSIBILITIES FOR REVIEW

If a state of emergency is declared, *the government has the power to order restrictions on the exercise of certain rights and freedoms* (freedom of movement and residence, freedom of assembly, a right to do business, and others). It does so *in the form of so-called government crisis measures*, which are adopted based on the Crisis Management Act (Articles 5 and 6). It is through these government measures that there is significant interference with the rights and freedoms of natural and legal persons. For example, the closure of schools interferes with the right to education, the closure of shops and services interferes with the right to do business and conduct economic activity, and the ban on leaving the Czech Republic restricts freedom of movement.

The question is therefore whether the persons affected by such government measures can defend themselves against the measures and their effects, and by what means. However, answering this question is subject first to determining the legal nature of the government's crisis measures, and it can be stated in advance that this is a very complicated issue.

Unfortunately, *the legal form of the crisis measures cannot be deduced from the relevant legislation*. The Constitutional Act on the Security of the Czech Republic and the Crisis Management Act do not stipulate in what form the government should adopt the crisis measures.[19] Judicial practice has therefore tried to define their nature. In a series of plenary decisions, *the Constitutional Court concluded that a government crisis measure is not a measure of a general nature* within the meaning of the Administrative Procedure Code (Article 171).[20]

A measure of a general nature is regulated in the Administrative Procedure Code (Article 171 et seq.), which stipulates that a measure of a general nature is neither a decision nor legislation (a negative legal definition). Its basic features are the specificity of the subject of the regulation and the generality of the addressees. From a formal point of view, government crisis measures cannot be considered measures of a general nature because the law does not explicitly label them as such. Therefore, it remains to be assessed whether they are measures of a general nature from a material point of view. However, even from the material point of

view, according to the Constitutional Court these are not measures of a general nature as the crisis measures have a relatively general subject of regulation in terms of territory and matter.[21] There is therefore no feature or specificity that is a typical feature of a measure of a general nature.[22] Thus, government crisis measures are not measures of a general nature according to the Administrative Procedure Code (neither from a formal nor from a material point of view).

There is relative agreement on this negative definition. However, in relation to the possibilities for reviewing government crisis measures, this means *they cannot be reviewed in proceedings to annul measures of a general nature within the administrative judiciary* (Article 101a et seq. of the Code of Administrative Justice). The Code of Administrative Justice provides a very wide locus standi to bring an action before the court, as it provides that an application to annul a measure of a general nature may be filed by a person who claims that their rights have been curtailed by a measure of a general nature issued by an administrative body. Unfortunately, in view of the above conclusions, the natural or legal persons affected by a crisis measure of the Czech government cannot use this procedure.

However, the positive definition of government crisis measures is much more problematic. It is therefore very difficult to determine which kind of legal act is a crisis measure. In assessing their form, *it is necessary to evaluate each measure of the government separately, according to its content and the features it exhibits*. This is a basic rule of approach to solving this problem. It was on this basis that the Constitutional Court concluded that *the government's crisis measures may, according to their content, have the legal form of*:

- *sui generis* legislation (for example, judgment of the Constitutional Court of 5 May 2020, file no. Pl. ÚS 10/20; or judgment of the Constitutional Court of 11 May 2021, file no. Pl. ÚS 23/21),[23]
- an individual administrative act – a decision (judgment of the Constitutional Court of 12 May 2020, file no. Pl. ÚS 11/20), or
- an internal act (judgment of the Constitutional Court of 26 January 2021, file no. Pl. ÚS 113/20).

Probably *most of the government crisis measures have been classified as sui generis legislation*.[24] These were cases where the government crisis measures applied to the whole territory of the Czech Republic and at the same time covered an unlimited number of entities (persons). Typical examples included the government crisis measure that prohibited Czech citizens from traveling abroad, or the government crisis measure that closed schools and switched to online teaching, and many more. The Constitutional Court, which assessed the nature of such measures, always relied primarily on the content of each crisis measure. The above examples of measures represented general regulations, which regulate their subject and entities with generic features and apply to the whole territory of the Czech Republic and to an unlimited number of subjects. These government measures were also promulgated in the same way as the law in the Collection of Laws. In view of these facts, the Constitutional Court concluded that this is *sui generis* legislation.[25]

If a government crisis measure is evaluated as legislation, it is also necessary to examine on this basis how natural and legal persons can defend against the measures.

Let us first consider the defence within the administrative judiciary. If a crisis measure is legislation (sui generis), *it cannot be directly challenged by an action in the administrative judiciary*. The Code of Administrative Justice[26] does not provide for such a type of action. Administrative courts may review other legislation *only in connection with its application in individual and specific cases (incidentally)*. Therefore, a government crisis measure must be applied in a specific case. If a crisis measure has been used in a decision of an administrative body, the compliance of the crisis measure with the law or constitutional order will be assessed in proceedings on an action against a decision of an administrative body (Article 65 et seq. of the Code of Administrative Justice).[27] Similarly, if a crisis measure caused an unlawful intervention of an administrative body, it will be reviewed within the proceedings on an intervention action (Article 82 et seq. of the Code of Administrative Justice).[28]

Article 95 para. 1 of the Constitution of the Czech Republic is important here for the administrative courts because it provides that a judge is bound by law and an international agreement – which is part of the Czech legal order – when making decisions; they are entitled to assess the compliance of another legal regulation with the law or with such international agreement. Thus, in the proceedings on an action against a decision or in the proceedings on an action for protection against unlawful interference, the judge will also assess the constitutionality and legality of the crisis measure based on which the decision was issued (or an intervention was made). If the judge concludes that the crisis measure was issued in violation of the law or the Constitution, *they do not annul it, they only do not apply it in a specific case or proceedings*.[29]

Let us now turn to the possibilities of defence within the *constitutional judiciary*. In the Czech Republic, natural and legal persons are not entitled to file a separate proposal for the repeal of legislation. Therefore, in cases where we consider government crisis measures to be legal regulations, *the addressees cannot defend themselves directly against them by proposing their annulment at the Constitutional Court*. Natural and legal persons may demand the annulment of a legal regulation *only together with a constitutional complaint* challenged by a specific decision or intervention of a public authority (Article 74 of the Constitutional Court Act). Therefore, a crisis measure would have to be applied in practice again and a specific decision or intervention would be issued, which the person would subsequently challenge with a constitutional complaint. And only together with this complaint can a/an (accessory) proposal to repeal the crisis measure be attached. The condition for this is that the application of the crisis measure interfered with the constitutionally guaranteed rights or freedoms of the person. An "*actio popularis*" *is not permitted by Czech law.*

Czech legislation contains the powers of the Constitutional Court to repeal legal regulations, i.e. government crisis measures too. The Constitutional Court may do so within the framework of proceedings on repealing laws or other legal regulations (Article 64 et seq. of the Constitutional Court Act). However, *a proposal to repeal a legal regulation may only be submitted by the statutory range of entities*,[30] which does not include natural and legal persons. They can only demand the repeal of a legal regulation together with a constitutional complaint, as mentioned above. However, it should be added that the filing of a constitutional complaint is preceded by the obligation to exhaust all previous means of defence (e.g. an appeal must be lodged against the decision, then an action against the decision and a cassation complaint within the administrative judiciary). The person concerned therefore faces a relatively lengthy legal process before reaching the Constitutional Court.

In summary therefore, *if the government crisis measure is considered a legal regulation in a specific case, the defence options of natural and legal persons are very limited*. In substance, the possibility of direct, immediate defence is not enshrined in Czech law for these persons. They can only defend themselves if they are specifically affected by the application of a crisis measure (e.g. a decision has been issued imposing a sanction for non-compliance of the measure). Within the administrative judiciary, based on an action and subsequently a cassation complaint, the court also reviews the legality and constitutionality of the crisis measure and, if necessary, it does not apply it. However, the court cannot cancel it.[31] Within the constitutional judiciary, after exhausting all previous means of defence a constitutional complaint can be filed, together with a proposal for repealing a government crisis measure. If the Constitutional Court finds the crisis measure unlawful or unconstitutional, it will annul it. Therefore, the direct defence options for natural and legal persons were very aptly expressed by the Constitutional Court. It stated that government resolutions on the adoption of a crisis measure, if they are in the form of a normative act, cannot be challenged by a person "without being applied to him or her."[32]

In some cases, *a government crisis measure may be considered a decision* (an individual administrative act). The Crisis Management Act (Article 8) stipulates that the government issues the crisis

measures in a decision. In this way it exercises its powers pursuant to Article 6 para. 1 of the Constitutional Act on the Security of the Czech Republic, which assumes that the government, at the same time as declaring a state of emergency, defines which rights and to what extent they are restricted and which obligations and to what extent they are imposed. However, the notion of a "decision" used in crisis law can be confusing. The mere designation of a government act as a "decision" does not yet make it an individual administrative act. It is not possible to proceed from the formal designation of the act, but from a material point of view. It is therefore always necessary to primarily explore the content of the act. As mentioned above, crisis measures will typically take the form of legislation due to their abstract and general nature. However, it cannot be ruled out that a crisis measure may only concern a certain specific matter or affect a certain specifically defined group of people. After all, Article 2 lit. c) of the Crisis Management Act defines a crisis measure as an organisational or technical measure intended to resolve a crisis situation and eliminate its consequences, including measures that interfere with the rights and obligations of the persons. A crisis measure can therefore also take the form of a decision (individual administrative act).[33]

In such a case, the Czech legal system already *allows a direct means of defence for natural and legal persons too*. Such a decision could be reviewed both within the administrative judiciary (an action against the decision and subsequently a cassation complaint) and within the constitutional judiciary (a constitutional complaint of a natural or a legal person). In practice, however, crisis measures do not occur in this form.

Finally, case law has concluded that *crisis measures may in some cases take the form of an internal act*. These were, for example, a government resolution by which the government had given its prior consent to the Ministry of Health's intention to issue some protective measures in connection with COVID-19,[34] or a government resolution by which the government agreed to extend the state of emergency and obliged the Prime Minister to submit its request to the Assembly of Deputies.[35] Such government resolutions cannot be considered legislation or individual decisions. In both cases they are only acts of an internal nature.[36] These acts are not generally binding and do not interfere with the rights and obligations of natural and legal persons, or the rights and obligations of such persons may not be affected by these acts.

From the point of view of a legal defence against these acts, *they are not open to challenge either within the administrative judiciary or within the constitutional judiciary*. However, this is a logical consequence of the fact that they do not or cannot interfere in any way with the rights and obligations of natural and legal persons. At the same time, they do not even represent a means of a generally binding regulation for social behaviour, so they are not legal regulations.

However, the opinions above are not accepted without reservation within professional circles. For example, constitutional judge V. Sládeček expressed the opinion that crisis measures are taken based on the Constitutional Act on the Security of the Czech Republic, as well as the decision itself to declare a state of emergency. They therefore have the same legal nature, and so in his opinion, they can only be reviewed by the Assembly of Deputies (as in the case of declaring a state of emergency).[37] He considers that the government crisis measures are not *sui generis* legislation and points out that they can certainly not be by-laws, as they interfere with constitutionally guaranteed rights and freedoms. He believes they should have a similar status to laws. Yet he himself considers them to be specific constitutional acts issued in an emergency situation where the lives and health of the population are endangered.[38] On the contrary, Professor J. Wintr considers that government crisis measures, as acts interfering with fundamental rights and freedoms, must be subject to a judicial review. According to him, any other interpretation is unsustainable. At the same time, he considers that if the government measures were to have the nature of a law, such a government power would have to be expressly enshrined in the legal system. Therefore, he is inclined to argue that they are more like

secondary legislation, when he points out that the Constitutional Court also leans towards this conclusion in a number of its decisions.[39]

As pointed out above, *government crisis measures can take various legal forms*. However, the different nature of the crisis measures does not change the fact that these acts may be issued *only based on authorisation and within the limits set by the constitutional order,* and that they must not interfere with fundamental rights and freedoms in violation of the Charter of Fundamental Rights and Freedoms. This fact is also explicitly emphasised in Article 6 para. 1 of the Constitutional Act on the Security of the Czech Republic, according to which the government may only restrict rights "in accordance with the Charter of Fundamental Rights and Freedoms." When restricting rights or setting obligations, the government must always respect the requirement under Article 4 para 4 of the Charter of Fundamental Rights and Freedoms. It stipulates that where fundamental rights and freedoms are restricted, their essence and meaning must be safeguarded, and at the same time such restrictions must not be abused for purposes other than those for which they were imposed. It is also ruled out that constitutionally guaranteed fundamental rights and freedoms, which would be affected by a crisis measure, be excluded from the protection of the judiciary in the sense of Article 4 of the Constitution of the Czech Republic. Such intervention must always be subject to a judicial review, at least by the Constitutional Court. The crisis measures, which (directly or indirectly) interfere with fundamental rights and freedoms, may take on various forms and content, but must always (depending on their content) be reviewable either as legislation or as a decision or other intervention of a public authority.[40]

4. CONCLUSION

It follows from the above that the Czech legal system was not very prepared to deal with the state of the pandemic. Although the Constitutional Act on the Security of the Czech Republic, the Crisis Management Act and the Act on the Protection of Public Health provide for the resolution of emergency situations, in practice it was, and is, clearly visible that these solutions are insufficient.

The very declaration of a state of emergency raises a number of problems and questions. Unfortunately, the laws do not address the legal form of a government decision to declare a state of emergency. At the same time, it is a fundamental issue on which the subsequent control of this government decision and the possibility of its review is derived. The solution was therefore left to case law and legal doctrine, which relatively speaking agreed that it is a specific constitutional act of the government, issued in an emergency situation endangering the lives and health of the population. I agree with this opinion, however, in my opinion *it would be more appropriate for the legal form of the government's decision to declare a state of emergency to be explicitly regulated by law* (specifically by the Constitutional Act on the Security of the Czech Republic).

The conclusions on the form of this act are also reflected in the considerations on the possibilities for reviewing this government decision. The majority conclusion (see more details above) is that the government's decision to declare a state of emergency is not subject to review by a court, not even by the Constitutional Court. The only one who can "control" and repeal the act is the Assembly of Deputies. I believe such a situation is extremely unsatisfactory. The declaration of a state of emergency is a very strong power of the executive and is associated with the possibility of serious interference with the fundamental rights and freedoms of citizens. Therefore, *it should be subject to a review by the Constitutional Court*. *De lege ferenda*, I would recommend that *such a competence of the Constitutional Court be incorporated into the Constitution of the Czech Republic* and then elaborated in more detail in the relevant laws. Criticism of the current situation is also made by the courts and legal doctrine.[41] Although at present the declaration of a state of emergency may be controlled by the Assembly of Deputies, such control can be considered insufficient. The Assembly of Deputies is a political body, and in addition, the

government often has a decision-making majority in the Assembly of Deputies. The minority opposition therefore has little chance of abolishing the declaration of a state of emergency within the Assembly of Deputies. Moreover, the control by the Constitutional Court would undoubtedly be a control carried out by a highly professional body.

Even more problems are associated with government crisis measures issued in an emergency state and which may restrict the exercise of fundamental rights and freedoms. The basic problem again is that there is no consensus on the legal form of these measures. The laws are silent on this aspect, and case law always considers this issue on an *ad hoc* basis. Therefore, they may take on different forms in different situations (legislation, decisions, etc.). A judicial review is already possible in these cases (but always depending on the form of the specific crisis measure). However, there is very limited judicial control. In addition, natural and legal persons do not have the right to seek direct protection against government crisis measures, only subsequently, after such a measure has been applied in practice against them (for example, a sanction is imposed by a decision for violation). Therefore, people are essentially "forced" to violate the government crisis measures to gain access to judicial protection.[42] It is a procedurally risky process and often a lengthy one. I believe *it would therefore be appropriate to consider introducing direct judicial control over these measures*, and I would consider it appropriate *to review them in administrative courts* (similar to the new Pandemic law[43] in relation to emergency measures of the Ministry of Health or regional health stations).

Recently, the so-called Pandemic law was adopted in the Czech Republic (Act on Emergency Measures in the COVID-19 Pandemic). Since it entered into force, the Czech Republic has been on a state of pandemic alert. At the same time, the law regulates the powers of the Ministry of Health and regional hygiene stations to issue extraordinary measures, including their judicial review. Compared to the state of emergency and crisis measures, the possibilities of interfering with human rights and freedoms are lower. The law has limited effectiveness until 28 February 2022. In my opinion, this law only solves problems temporarily and only in relation to the COVID-19 pandemic. The state of emergency and the crisis measures of the government associated with it can be applied at any time when needed in the future (i.e. not only in connection with resolving a pandemic). Therefore, I would strongly recommend eliminating at least the most fundamental shortcomings of the current legal regulation. This means legally defining the legal form of declaring a state of emergency and crisis measures, and clearly enshrining the judicial review of these acts of government.

Notes

1 Ústavní zákon č. 110/1998 Sb, o bezpečnosti České republiky [Constitutional Act No. 110/1998 Coll., on the Security of the Czech Republic], Sbírka zákonů [Czech Official Gazette], https://www.zakonyprolidi.cz/cs/1998-110, (11 September 2021).

2 For more details see Bílková, V., Kysela, J., Šturma, P. (eds.) (2016) *Výjimečné stavy a lidská práva* [*States of emergency and human rights*] (Praha: Auditorium), or Dienstbier, J. (2016) Mimořádné situace a stavy v ústavní historii [Extraordinary situations and states in constitutional history] In: Wintr, J., Antoš, M. (eds.) *Vybrané problémy ústavního práva v historické perspektivě* [*Selected problems of constitutional law in a historical perspective*] (Praha: Univerzita Karlova, Právnická fakulta), 19-31., or Kudrna, J. (2017) Ústavní rámec zajišťování bezpečnosti České republiky – zhodnocení současného stavu a úvahy de lege ferenda [The constitutional framework for ensuring the security of the Czech Republic – an assessment of the current situation and considerations de lege ferenda], Acta Universitatis Carolinae. Iuridica, 63(4), 159-174.

3 There was a state of emergency in the Czech Republic in the following periods: 12 March 2020 to 17 May 2020, 5 October 2020 to 14 February 2021, 15 February 2021 to 26 February 2021, and 27 February 2021 to 11 April 2021.

4 Zákon č. 240/2000 Sb., o krizovém řízení a o změně některých zákonů [Act No. 240/2000 Coll., on Crisis Management and on Amendments to Certain Acts (Crisis Act)], Sbírka zákonů [Czech Official Gazette], https://www.zakonyprolidi.cz/cs/2000-240, (11 September 2021).

5 For more details see Articles 5 and 6 of the Crisis Act.

6 Zákon č. 258/2000 Sb., o ochraně veřejného zdraví [Act No. 258/2000 Coll., on the protection of public health], Sbírka zákonů [Czech Official Gazette], https://www.zakonyprolidi.cz/cs/2000-258, (11 September 2021).

7 For more details see Wintr, J. (2020) K ústavnosti a zákonnosti protiepidemických opatření na jaře 2020 [On the constitutionality and legality of anti-epidemic measures in spring 2020], *Správní právo* [*Administrative Law*] 53(5-6), 282 et seq. Or Dienstbier, J., Derka, V., Horák, F. (2020) Ústavnost mimořádných opatření podle zákona o ochraně veřejného zdraví [Constitutionality of emergency measures under the Public Health Protection Act], *Právník* [*Lawyer*], 159(5), 417-450.

8 Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 22 April 2020, Pl. ÚS 8/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Pl._US_8_20_vcetne_disentu_na_web.pdf, (11 September 2021).

9 Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 12 May 2020, Pl. ÚS 11/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Usneseni/Pl._US_11_20_vcetne_disentu_na_web.pdf, (11 September 2021).

10 Mareš, M., Novák, D. (2019) *Ústavní zákon o bezpečnosti České republiky. Komentář* [*Constitutional Act on the Security of the Czech Republic. Commentary.*] (Praha: Wolters Kluwer), 53, or Rychetský, P., Langášek, T., Herc, T., Mlsna, P. et al. (2015) *Ústava České republiky. Ústavní zákon o bezpečnosti ČR. Komentář* [*Constitution of the Czech Republic. Constitutional Act on the Security of the Czech Republic. Commentary*] (Praha: Wolters Kluwer), 1154-1155.

11 Zákon č. 182/1993 Sb., o Ústavním soudu [Act No. 182/1993 Coll., Constitutional Court Act], Sbírka zákonů [Czech Official Gazette], https://www.zakonyprolidi.cz/cs/1993-182, (11 September 2021).

12 Filip, J., Holländer, P., Šimíček, V. (2007) *Zákon o Ústavním soudu. Komentář.* [*Constitutional Court Act. Commentary.*] (Praha: C. H. Beck), 224.

13 Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 22 April 2020, Pl. ÚS 8/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Pl._US_8_20_vcetne_disentu_na_web.pdf, (11 September 2021).

14 Sládeček, V. (2020) Vláda a nouzový stav [Government and state of emergency], *Správní právo* [*Administrative Law*] 53(5-6), 271. See also a separate vote of the Judge R. Suchánek or the Judge M. Tomková in Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 22 April 2020, Pl. ÚS 8/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Pl._US_8_20_vcetne_disentu_na_web.pdf, (11 September 2021).

15 Sládeček, V. (2020) Vláda a nouzový stav [Government and state of emergency], *Správní právo* [*Administrative Law*] 53(5-6), 271. Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 22 April 2020, Pl. ÚS 8/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Pl._US_8_20_vcetne_disentu_na_web.pdf, (11 September 2021).

16 Rychetský, P., Langášek, T., Herc, T., Mlsna, P. et al. (2015) Ústava České republiky; Ústavní zákon o bezpečnosti České republiky. Komentář (Praha: Wolters Kluwer), 1154–1155; or Mareš, M., Novák, D. (2019) Ústavní zákon o bezpečnosti České republiky. Komentář (Praha: Wolters Kluwer), 53.

17 Sládeček, V. (2020) Vláda a nouzový stav [Government and state of emergency], *Správní právo* [*Administrative Law*] 53(5-6), 271. Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 22 April 2020, Pl. ÚS 8/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Pl._US_8_20_vcetne_disentu_na_web.pdf, (11 September 2021).

18 Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 22 April 2020, Pl. ÚS 8/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Pl._US_8_20_vcetne_disentu_na_web.pdf, (11 September 2021).

19 Rozsudek rozšířeného senátu Nejvyššího správního soudu ČR [Judgment of the Enlarged Senate of the Supreme Administrative Court of the Czech Republic], 30 June 2021, 9 As 264/2020, http://www.nssoud.cz/files/SOUDNI_VYKON/2020/0264_9As__2000051_20210630144320_20210630160022_prevedeno.pdf, (11 September 2021).

20 Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 21 April 2020, Pl. ÚS 7/20, https://www.zakonyprolidi.cz/judikat/uscr/pl-us-7-20-1, (11 September 2021). Similarly, for example, Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 22 April 2020, Pl. ÚS 8/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Pl._US_8_20_vcetne_disentu_na_web.pdf, (11 September 2021).

21 For more details, see Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 21 April 2020, Pl. ÚS 7/20, https://www.zakonyprolidi.cz/judikat/uscr/pl-us-7-20-1, (11 September 2021).

22 Bahýľová, L., Hejč, D. (2017) *Opatření obecné povahy v teorii a praxi* [*Measure of general nature in theory and practice*] (Praha: C. H. Beck), 24-26.

23 Similarly Rozsudek rozšířeného senátu Nejvyššího správního soudu ČR [Judgment of the Enlarged Senate of the Supreme Administrative Court of the Czech Republic], 30 June 2021, 9 As 264/2020, http://www.nssoud.cz/files/SOUDNI_VYKON/2020/0264_9As__2000051_20210630144320_20210630160022_prevedeno.pdf, (11 September 2021).

24 Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 5 May 2020, Pl. ÚS 10/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Usneseni/Pl._US_10_20_vcetne_disentu.pdf, (11 September 2021), or Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 8 December 2020, Pl. ÚS 102/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovana_usneseni/Pl._US_102_20_vcetne_disentu.pdf, (11 September 2021), or Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 24 November 2020, Pl. ÚS 105/20, https://www.zakonyprolidi.cz/judikat/uscr/pl-us-105-20-2, (11 September 2021).

25 Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 5 May 2020, Pl. ÚS 10/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Usneseni/Pl._US_10_20_vcetne_disentu.pdf, (11 September 2021).

26 Zákon č. 150/2002 Sb., soudní řád správní [Act No. 150/2002 Coll., Code of Administrative Justice], https://www.zakonyprolidi.cz/cs/2002-150, (11 September 2021).

27 For example, a natural person violates an obligation imposed by a crisis measure and, as a result, is fined by a decision.

28 For example, an assembly is prohibited by the crisis measure. The person takes part in the prohibited assembly and is prosecuted by the Police of the Czech Republic.

29 See Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 12 May 2020, Pl. ÚS 11/20, but also the opposite opinion in the dissent of Judge J. Filip on this decision, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Usneseni/Pl._US_11_20_vcetne_disentu_na_web.pdf, (11 September 2021).

30 See Article 64 of the Constitutional Court Act.

31 In the same way, Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 11 May 2021, Pl. ÚS 23/21, https://www.zakonyprolidi.cz/judikat/uscr/pl-us-23-21-1, (11 September 2021).

32 Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 15 December 2020, Pl. ÚS 111/20, https://www.zakonyprolidi.cz/judikat/uscr/pl-us-111-20-1, (11 September 2021).

33 Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 5 May 2020, Pl. ÚS 10/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Usneseni/Pl._US_10_20_vcetne_disentu.pdf, (11 September 2021).

34 Usnesení vlády ČR [Resolution of the Government of the Czech Republic], 14 December 2020, No. 1338, https://apps.odok.cz/attachment/-/down/IHOABWDCRS07, (11 September 2021).

35 Usnesení vlády ČR [Resolution of the Government of the Czech Republic], 17 December 2020, No. 1339, https://www.vlada.cz/assets/media-centrum/aktualne/prodlouzeni-nouzoveho-stavu.pdf, (11 September 2021).

36 For more details, see Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 26 January 2021, Pl. ÚS 113/20, https://www.zakonyprolidi.cz/judikat/uscr/pl-us-113-20-1, (11 September 2021).

37 Sládeček, V. (2020) Vláda a nouzový stav [Government and state of emergency], *Správní právo* [*Administrative Law*] 53(5-6), 272-273.

38 Sládeček, V. (2020) Vláda a nouzový stav [Government and state of emergency], *Správní právo* [*Administrative Law*] 53(5-6), 273 et seq.

39 Wintr, J. (2020) K ústavnosti a zákonnosti protiepidemických opatření na jaře 2020 [On the constitutionality and legality of anti-epidemic measures in spring 2020], *Správní právo* [*Administrative Law*] 53(5-6), 287-288, and the case law of the Constitutional Court of the Czech Republic cited here.

40 Usnesení Ústavního soudu ČR [Judgment of the Constitutional Court of the Czech Republic], 22 April 2020, Pl. ÚS 8/20, https://www.usoud.cz/fileadmin/user_upload/Tiskova_mluvci/Publikovane_nalezy/2020/Pl._US_8_20_vcetne_disentu_na_web.pdf, (11 September 2021).

41 Sládeček, V. (2020) Vláda a nouzový stav [Government and state of emergency], *Správní právo* [*Administrative Law*] 53(5-6), 272, or Rozsudek rozšířeného senátu Nejvyššího správního soudu ČR [Judgment of the Enlarged Senate of the Supreme Administrative Court of the Czech Republic], 30 June 2021, 9 As 264/2020, http://www.nssoud.cz/files/SOUDNI_VYKON/2020/0264_9As__2000051_20210630144320_20210630160022_prevedeno.pdf, (11 September 2021).

42 See the separate vote of Judge K. Šimka in Rozsudek rozšířeného senátu Nejvyššího správního soudu ČR [Judgment of the Enlarged Senate of the Supreme Administrative Court of the Czech Republic], 30 June 2021, 9 As 264/2020, http://www.nssoud.cz/files/SOUDNI_VYKON/2020/0264_9As__2000051_20210630144320_20210630160022_prevedeno.pdf, (11 September 2021).

43 Zákon č. 94/2021 Sb., o mimořádných opatřeních při epidemii onemocnění COVID-19 [Act No. 94/2021 Coll., On emergency measures in the event of an epidemic of COVID-19], https://www.zakonyprolidi.cz/cs/2021-94, (11 September 2021).

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E-Government – Shaping Europe's Digital Future[1]

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Abstract: E-Government has become one of the most important phenomena of public administration in the 21st century. Digitising public administration is part of the European agenda to help European citizens gain access to public services through information technologies. Integrating electronic solutions into the public administration process provides opportunities for much more efficient public administration that is open, inclusive, citizen-friendly, and able to provide personalised, borderless, end-to-end digital public services. Innovative legislative approaches in conjunction with modern information technologies must be used to design and deliver better services in line with the needs and demands of citizens in the modern world. E-Government has already proven to be an incredibly powerful strategic tool for the transformation of the public sector and to utilise these benefits – it is time that the EU Member States take concrete actions to develop cross-border digital public services. The presented article will take a look at e-Government in general, in context of the EU and provide a case-study on the Slovak Republic's introduction of the e-Government.

Keywords: administrative reform, e-government, digital divide, data protection, electronic delivery

1. INTRODUCTION

The rise of e-Government has undoubtedly been one of the most important developments in public administration in recent decades. It has introduced new terminology and links between theory and practice. Naturally, e-Government is a term that is ever-evolving, so it might seem like a daunting task to discuss the potential future scope and role of e-Government. Effective digital public services are able to provide a wide array of benefits. These include more financial savings for governments and businesses, greatly increased transparency, efficiency of public services, and the inclusion of citizens in political life. While we primarily look at the question from a legal perspective, it is paramount to understand that the implementation of individual e-Government procedures is highly dependent on computer technology, political decisions, and the willingness to further develop and invest in these procedures. The development of innovative technologies – i.e. various social networks – has increased the expectations of citizens when communicating with public authorities and accessing all kinds of services online. Still, if we look at the practical side of things, cross-border e-Government services are relatively scarce, and even when they are offered, the majority of citizens are reluctant to use them,[2] which tells us there is a need to move towards a more transparent design and delivery of online services. The combination of new technologies, open specifications, innovative architectures, and the availability of public sector information can deliver greater value to citizens with fewer resources.[3] Many countries have recognised the potential that information and communication technology offers in providing services to citizens, organisations and companies. Digital development, therefore, pushes the legislature to provide an adequate legal framework for electronic public administration. Various governments have started to draft provisions in their administrative law to regulate electronic administrative communication and remove legal obstacles that might exclude electronic services from public administration. Governments should be aware of the growing number of digital alternatives avail-

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able to citizens and offer them to provide online services. In a highly globalised world, where borders no longer seem to be relevant, people have free access to information, and it makes them aware of the quality of public administration and the services offered by other governments.

2. DEFINING E-GOVERNMENT

E-Government – or electronic government – refers to the use of information and communication technology (ICT) applications to deliver various government services. E-Government as an application of information and communication technologies in public administration has been an integral part of the transformation process of public administration since the 1980s, although the actual term e-Government only began to be promoted at the turn of the millennium.

According to some authors,[4] e-Government can be defined as all uses of information and communication technology in the public sector, which is a very broad approach to defining this term. The OECD defines e-Government as the use of electronic communications, in particular the internet, as a tool for achieving better governance.

Other authors concentrate on the public services aspect only, according to the concept that e-government refers to the delivery of information and services online through the internet and other digital means.[5] It should not be overlooked, however, that e-Government is often closely related to other processes of public administration, which are included under the broader concept of governance. Although it is not the same, and governance is a much broader concept, its role in this context cannot be neglected. This broader approach to e-Government highlights that it relates to the entire range of government activities and government roles, utilising information and communication technologies. In this concept, e-Government brings together two elements that have never been naturally joined in the past – the environment created using electronic technologies combined with management models.[6]

Some authors understand e-Government as the use of information technology by public institutions to ensure the exchange of information with citizens, private organisations and other public institutions with the aim of increasing the efficiency of internal functioning and the provision of fast, accessible and quality information services.[7] A very similar definition is that e-Government is understood as an effective way of providing public services by integrating information and communication technologies that enable citizens to participate fully in social and cultural life, including the democratic process.[8] The Ministry of the Interior of the Czech Republic, as well as the Ministry of Finance of the Slovak Republic (which at the time of establishing e-Government in Slovakia was competently responsible for the informatisation of society), has published a glossary of terms in which it defines e-Government as a process of modernisation of public administration with the use of new possibilities of information and communication technologies, or as a technique of public administration with the use of tools of information and communication technologies, and it considers terms such as electronisation or informatisation of public administration as being equivalent to this term.[9]

According to the European Commission's vision, public administrations of the 21st century will be "*recognised for being open, flexible and collaborative in their relations with citizens and businesses. They use eGovernment to increase their efficiency and effectiveness and to constantly improve public services in a way that caters for user's different needs and maximises public value, thus supporting the transition of Europe to a leading knowledge-based economy.*"[10]

E-Government is similarly defined by Prins, Professor of Law and Informatisation at the University of Tilburg, who also uses a broad definition of e-Government, understanding it as administrative communication and processes carried out electronically.[11]

A comparison of the above listed definitions of e-Government and an analysis of the concept of e-Government in foreign literature, in legally binding legislation as well as in conceptual and stra-

tegic materials allows us to conclude that a clear definition of what e-Government is or should be in the future is lacking. However, awareness is gradually rising that the development of e-Government may coincide with an unprecedented challenge to the institutions and procedures through which public governance is traditionally delivered.

In principle, the legislation that regulates e-Government in European countries can be divided into two types:
- special laws that directly regulate the use of electronic tools, such as the law on electronic signatures or the laws on registers,
- amendments to general procedural rules that enable the use of established institutions.

While the introduction of new tools to the legal framework is crucial, it is important to note that the regulation itself does not guarantee the actual use of these tools in the public administration process. Therefore, procedural regulations must also be amended in the context of e-Government. The introduction of electronic procedures in public administration means in most cases a duplication of existing possibilities and not their full transformation into electronic form. This is also why the procedural legislation retains the original procedures (e.g. filing in paper forms or oral procedures) and new electronic forms are only added as additional alternatives. This is because e-Government tools are not universally available and will undoubtedly continue like this for some time to come, so those "digitally excluded" must also be given access to the law. The question remains, however, do we know if citizens actually utilise the digital tools at their disposal? Are the EU Member States gathering data on the percentage of submissions made electronically? There is surprisingly little statistical data in this area in most countries, but the data we do have shows that the proportion of electronic methods has been increasing over time. If we look at surveys at the EU level, it is remarkable to note that there is hardly any empirical data available on the use of electronic public services by citizens.

Literature often talks about the four stages of e-Government.[12] The first stage is referred to as emerging or web presence, where individual public administration organisations passively provide electronic information including the same level of information as printed brochures would. In this stage, the e-Government online presence usually consists of a web page, links to ministries or other departments may or may not exist, links to local governments may or may not exist; some archived information may be available online, but most information remains static with the fewest options for citizens.

In the second stage, the interaction stage, communication occurs mainly through conventional emails between G2C, G2B and G2G. This includes providing email contact forms for collecting questions and providing information in response. In the interaction stage, the government provides greater public policy and governance sources of current and archived information, this includes various policies, laws and regulations, as well as reports, newsletters, and databases. Citizens can easily search for documents and information – making this stage a lot more sophisticated than stage one, even though the interaction is still mostly passive and one-sided, with the information flowing from the government to the citizens.

The third stage, referred to as the transactional stage, is characterised by the creation of specific applications for the trusted electronic delivery and execution of submissions, in other words, the government implements tools that help the public gain access to public services, but does not use the internet as a tool for systemic transformation. This stage involves the ability to make financial transactions for use of government services. Compared to the first two stages, the flow of information is no longer unidirectional, but allows two-way interaction between the citizen and the government. Generally, this means options for paying taxes online; applying for ID cards, birth certificates, passport or license renewals – allowing citizens to approach public authorities easily, and most importantly, 24/7. Various fees and taxes can be paid online with credit or debit cards. Providers of services can bid online for public contacts via secure links, which not only increases

the efficiency of public services, but also ensures greater transparency.

The final stage of the transformation (also referred to as interactive democracy or connected presence) means integrated electronic services covering all electronic transactions, including electronic payments, developed portals providing various electronic services with enhanced accountability and elements of direct democracy. This stage involves making use of available data and learnings from transactions to transform governance and existing processes. This stage is the most sophisticated level in the online e-Government initiatives, and typically enables efficient two-way interactions of G2G, G2C and C2G. The government encourages participatory deliberative decision-making and open dialogue. In this model, the government actively solicits citizens' views on public policy, law-making, and democratic participatory decision-making.

Recent studies show that most governments are still at the first two stages of e-Government development.[13] To be able to achieve higher development level goals, most governments should reorganise completely. Interestingly, while we often emphasise the citizen-centric aspect of e-Government, the citizens themselves have scarcely been consulted in these reform processes. In the era of digitalisation, governments are looking for ways to reorganise their public services to their citizens, integrating information and communication technologies – which should ultimately result in better services for citizens.

The computerisation of public administration is not linked merely to technological advances, but also to the concept of citizenship in its dynamic form. Generally, e-Government policies have been strongly linked to a citizen-centric approach in government reform efforts. Over time, these efforts have evolved into something more ambitious – transforming from a tool for modernising government to a strategic approach to transforming government from a citizen's point of view.[14] Public administration in the offline world is mainly paper-based and supported by face-to-face contact. Traditionally, citizens get access to public services based on filling out a form, submitting a written request and providing official documents (driving licence, passport, birth certificate, etc.). The official documents serve to identify the citizen as an authorised user of public services – this verification of identity lies at the heart of government service provision. Throughout history, the authentication processes public administration bodies use have remained unchanged – showing an official document at one end of the equation and having a public official check and verify the official document at the other end. If we are to move towards becoming e-citizens, it is crucial to find a way to secure individual identification online that is transparent, unambiguously demonstrable, durably verifiable and above all – secure.

Most statistical data available only shows the quantitative side of things – the percentage of citizens utilising digital public services – but the data fails to delve deeper to touch on the qualitative aspect of the behaviours of e-citizens. In general, we can conclude that e-Government services are still rather limited in most countries, and in some countries, we see a declining trend (e.g. Slovakia 2010 results compared to 2020).[15] Survey results also show that although a large part of the European population is online in the 21st century, still a relatively small proportion of internet users make use of e-Government services (11%).

3. E-GOVERNMENT IN THE SLOVAK REPUBLIC

In the Slovak Republic, the term e-Government is nowadays commonly used in legal terminology in a theoretical setting, but only rarely in legal acts. In general, the Slovak legislator has paid virtually no attention to the proper adoption of terminology and the unification of e-Government terms is sorely lacking. Terms in the field of information and communication technology law are often adopted into the Slovak legal order with phonetic versions of English terms, and are seldom used in actual Slovak terms and/or language. The first

attempt at a unifying explanation was the Methodological Instruction on the Use of Professional Terms in the Field of Informatisation of Society, issued by the Ministry of Finance of the Slovak Republic in 2006.[16] The original idea was that the Methodological Instruction should be regularly updated, however, this is yet to be done. Apart from the absence of a legal definition of e-Government, it is important to note that the term e-Government appears in many strategic documents of the Government of the Slovak Republic dealing largely with the informatisation of society, the informatisation of public administration or information security. The Methodological Guideline states that the equivalents to the term e-Government are mainly the terms e-governance, electronic government and electronic public services. The term e-Government is defined as the use of information and communication technologies online in public administration, coupled with organisational changes and new skills to improve public administration services and the application of democratic practices.

The next milestone in the Slovak Republic was the e-Government Act in 2013,[17] which, among other things, introduced new concepts and institutions into our legal order and laid the foundations for the legal regulation of the electronic form of exercising the powers of public authorities. Strictly speaking, in terms of definition, even these two sources are not in alignment with what e-Government is. The understanding of this concept is significantly narrower in the Methodological Guideline, compared to the legal regulation defined in the e-Government Act. The primary reason being that the term e-Government cannot be narrowed down to the area of public administration only, according to the Act it is "*the exercise of public authority electronically*" and it also includes internal relations and internal processes of public authorities (e.g. internal decision-making processes, electronic filing and record-keeping).

The e-Government Act is a general legal regulation on the manner of exercising public authority in electronic form, which defines the related legal institutions and aims to enable the electronic services of public authorities to be implemented in a uniform manner. It is interesting to note that this act has made it obligatory to exercise public authority electronically, while giving citizens the option of choosing the form of communication. To accomplish this – to exercise public authority electronically – legal institutions such as electronic filing as well as electronic mailboxes and electronic delivery are crucial for the regulation of electronic communication with state and local government authorities. The e-Government Act is the first legal regulation in the Slovak Republic that codifies electronic communication as one of the main forms of communication with public authorities and the communication of public authorities with each other, in addition to the very basic, but so far still decisive and necessary, paper format. The legal regulation for the exercise of public authority by electronic means prior to the e-Government act was governed in a large number of special regulations, and in many proceedings it has been completely absent.

Some of the concepts and legal institutions regulated in the e-Government Act are new concepts and occur in our legal order for the very first time – but they are essential for the full exercise of public authority. Interestingly, Slovak law consistently distinguishes between the concepts of electronic communication and electronic official communication. The essence of electronic communication is the exchange of electronic messages containing electronic documents between two or more communicating entities. The Slovak e-Government Act attaches the same legal effects to an electronic filing as to a traditional paper filing. Electronic filing does not replace the methods of filing under the special rules, but does provide that if an electronic filing is made in the manner provided for in the e-Government Act, it is equal to filings made under the special rules.

The main objective of the e-Government Act was to create a legal environment to implement the exercise of public authority electronically and naturally to simplify, speed up and unify communication processes, and at the same time to eliminate the unnecessary fragmentation of the legal

regulation in a number of existing legal regulations regarding the provision of electronic services by public authorities to citizens, and by public authorities to each other – which in turn would lead to increased transparency. The e-Government Act created a functional model of electronic public administration services. An integral part of the electronic exercise of public authority was to create and legally ensure functional electronic mailboxes with the aim of reducing paper use and the ability to convert paper into electronic form, which represents, especially for citizens and businesses, an acceleration of processes and a simplification of administrative tasks.

While very important, the Methodological Guideline and the e-Government Act were not the only sources of the public administration reform, the implementation process was very complex and was preceded by a very demanding preparation phase. The preparatory process required a strategic approach embracing all areas affected by the mere existence of e-Government. Therefore, the strategic documents were – and are to this day – extremely important, forming the basis for building a well-functioning and efficient e-Government. In 2008, the Government of the Slovak Republic approved two basic, strategic documents regarding the informatisation of public administration (e-Government Strategy and the National Concept of Public Governance Informatisation). In 2009, a more detailed discussion of objectives arising from these documents began. One of the fundamental strategic documents for managing the informatisation of public administration in the Slovak Republic is the Strategy for the Informatisation of Public Administration (also known as the e-Government Strategy),[18] which defines the objectives of the process for introducing e-Government and defines the steps leading to the modernisation of public administration and the computerisation of its services.

The National Concept of Public Governance Informatisation (also known as the National Concept of eGovernment) introduces a new approach to e-Government, especially by focusing on the digitalisation of administration service sections in line with objectively defined competencies of state administration and local self-government. According to this document, the application of the principles and priorities combined with public administration information systems development, in line with integrated public administration information systems architecture, will result in a qualitative change in the provision of public administration services to the public, but also in administration services themselves.

Both documents mentioned above are based on the best practices of informatisation and building e-Government in other EU Member States and from the European i2010 initiative, which enabled the monitoring and comparison of the Slovak Republic in the European context. In 2011 another strategic document was approved, a Revision of the Building of e-Government, which at that time did not aim to replace the existing approved strategic documents but evaluated the practical level of project implementation. Both the Government Strategy and the National Concept of 2008 were revisited a few years later. The Government Strategy of 2008 was revamped in the form of the Strategic Document for Digital Growth and Next Generation Access Infrastructure, which defines a strategy for further development of digital services and next generation access infrastructure in Slovakia and focuses on the fulfilment of the ex-ante conditionalities by means of which the European Union evaluates the readiness of Member States to implement investment priorities of their choice. The previous strategic document clearly takes a very systematic approach to the digitalisation of public administration, whereas in 2014 the vision is much more functional and citizen-oriented. The Strategic Document contains a vision of e-Government development in Slovakia until 2020 and includes actions to move from the process of e-Government development to a functioning information society, with public administration alone having smart government features. Based on this concept information technologies would become inherent in people's everyday lives and an essential driver of Slovakia's competitiveness.

In this period of 2001-2018, several other strategic documents were developed and action plans pre-

pared, yet many of the plans did not progress from the planning stage and have not been implemented for public use. In comparison with other EU Member States, the digital transformation of public administration was significantly lagging behind. Informatisation was not completely stagnant, but the improvements were being rolled out at a much slower rate than the rest of the EU countries.

2019 reinvigorated the interest in digital transformation and The Strategy of the Digital Transformation of Slovakia was published with a catchy subtitle – Strategy for transformation of Slovakia into a successful digital country.[19] It set forth the priorities in the context of the ongoing digital transformation of the economy and society in the Slovak Republic. The Strategy accelerated ongoing processes in terms of building the digital market and carrying out various measures that arose from the most recent cross-sectoral policies of the EU. The Strategy also reflected on the strategic materials and recommendations of international organisations (EU, OECD, UN, G7 and G20) that consider digital transformation to be the key to inclusive and sustainable growth.[20] The Strategy represents a key and decisive document for the Slovak Republic at the beginning of the 21st century, when governments all over the world are feeling the need to change as industrial societies turn into information societies. This Strategy covers the period from 2019 to 2030 and it has been prepared as part of processes – already launched and partially managed – of digitalisation, informatisation and the single digital market agenda of the European Union. To achieve these goals, the Strategy puts the emphasis primarily on current innovative technologies such as Artificial Intelligence, Internet of Things, 5G Technology, Big Data and Analytical Data Processing, Blockchain and High-Performance Computing that should become the catalyst of economic growth.

These key technologies should be supported by the government in the following areas:
- artificial intelligence and blockchain, which are crucial in order to use the most revolutionary current technologies;
- data and privacy protection, necessary for creating a functioning data economy where consumer rights are ensured;
- high-performance computing and quantum computing;
- next generation fixed and mobile networks to allow Slovakia to get access to high-speed broadband connections, extension of NGA technologies to transfer data quickly and seamlessly;
- 5G networks to support autonomous and connected mobility and smart transport systems with massive utilisation expected in the future;
- the Internet of Things (IoT), in particular in the context of education. In fact, various primary and secondary school and university curricula in Slovakia have already been extended with matters concerning the Internet of Things.[21]

This wind of change also meant a transformation of digital administration legislation and in 2019, Act No. 95/2019 Coll. on Information Technology in Public Administration[22] entered into force replacing the former Act on information systems in public administration.[23] The new legislation brought a very significant systemic change into the management of information technologies in public administration. This meant the creation of some new public offices, as well as expanding the competencies of some existing public offices. It is pretty clear that the efforts started in 2019 were not left merely on the planning table, but the government took immediate steps towards implementing them as well. As an example, the Ministry of Finance of the Slovak Republic approved a feasibility study for the creation of an eInvoicing information system, which would offer a user-friendly interface facilitating the issuing, sending and receiving of electronic invoices. Another significant development was the practical implementation of Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation)[24] which was adopted on 23 July 2014 to provide a predictable regulatory environment to enable secure and seamless electronic interactions between businesses, citizens and public bodies. The electronic identification card is intended to serve as a means for ensuring unambiguous identification and guaranteed authentication of natural persons. The means of electronic identification is being used

for electronic services provided by public administration, but also for electronic services provided by other organisations or institutions at the national or supranational level. The introduction of the electronic identification card places the Slovak Republic among countries such as Austria, Finland, Estonia, Belgium, etc. In 2019 Slovakia launched an option to log into online public services with an ID or residence card for foreign nationals as well.

It is clear that the government has moved on from providing action plans and stepped onto a path of action. Five priority areas have been identified by the government to focus on in the run-up to 2030, these are: Economy, Society and Education, Public Administration, Territorial Development, and Science, Research and Innovation. As mentioned before, Slovakia has been at the tail end of the digital transformation, but if the very ambitious plans laid out in the past years are fulfilled, it would be able to transform Slovakia by 2030 into a modern country with a knowledge-based data economy and very efficient public administration. Naturally, the Covid-19 pandemic forced many governments to accelerate the process of digital transformation and Slovakia was not exempt from this. We are at the brink of an opportunity to hop on the digital bandwagon and include Slovakia among the digital leaders by 2030, making the country one of the top digital states worthy of following.

4. CONCLUSION

E-Government has become one of the most important phenomena of public administration in the 21st century. Since it is strongly linked to computer technology it requires special regulations, which, however, are still necessarily intertwined with the regulation of traditional institutions of public administration. In the 21st century, information technology can create the government of the future, the citizen-centric electronic government. E-Governments have the opportunity to overcome the hurdles of time, distance and state borders to perform public services in a truly efficient and transparent manner. Undoubtedly, smaller countries with smaller budgets do have a certain disadvantage in this area – just like it was presented in the case of the Slovak Republic. Budgetary and operational constraints often place these countries at the tail end of the digital transformation, therefor a strong strategy to implement modern public administration practices is needed in these countries. Slovakia has decided to step on this road, although it is too early to say if it will become the land of the envisioned digital administration by 2030.

In recent years, we have increasingly been surrounded by information and communication technologies, which are experiencing an ever-increasing boom, bringing fundamental changes to our lives and our view of the world around us. Credit and debit cards, mobile phones, televisions, personal computers and many other conveniences of the modern world have become completely commonplace for us. The penetration of new information and communication technologies into all levels of social life is what is fundamentally changing our society – and this naturally includes communication with public authorities. The European Union is taking many steps to make the most effective use of the changes brought about by the information society. The European Union's priority in the field of e-Government is not only to support the development of electronic public administration services in the individual Member States, but the direction of these activities carried out by the individual Member States towards ensuring the interoperability of these services, which is an essential prerequisite for achieving the priority objective of building cross border pan-European public administration services.

Notes

1 This work was supported by the Slovak Research and Development Agency under the contract No. APVV 16-0521.

2 Europe's Digital Competitiveness Report 2010, p. 88., http://intra.infso.cec.eu.int/C4/docs/main%20page/european_competitiveness_report_2010.pdf (September 9, 2021).

3 Communication from the Commission to the European Parliament on The European eGovernment Action Plan 2011-2015

4 Heeks, R. (2006) Implementing and Managing eGovernment: An International Text (London: SAGE Publications Ltd.), 3.

5 Silcock, R. (2001) What Is e-Government?, Parliamentary Affairs, 54(1), 88-101., doi: 10.1093/pa/54.1.88

6 Brown, D. (2005) Electronic Government and Public Administration, International Review of Administrative Sciences, 71(2), 242.

7 Lidinský, V. et al. (2008) *EGovernment bezpečně* (Praha: Grada Publishing), 6.

8 Smejkal, V., Valášek, M. (2012) *Jak na datovou schránku: Praktický manuál pro každého* (Praha: Linde Praha), 28.

9 Gregušová, D., Halásová, Z. (2018) *Zákon o e-Governmente - komentár* (Bratislava: Eurokódex), 328.

10 The European eGovernment Action Plan 2011-2015 Harnessing ICT to promote smart, sustainable & innovative Government, https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0743:FIN:EN:PDF (September 9, 2021).

11 Prins, J. E. J. (2001) Electronic Government. Variations on a Concept, In: Prins J. E. J (ed) *Designing E-Government. On the Crossroads of Technological Innovation and Institutional Change* (The Hague: Kluwer Law International), 1-5.

12 Mates, P., Lechner, T., Rieger, P., Pěkná, J. (2013) Towards e-Government project assessment: European approach, *Zbornik radova Ekonomskog fakulteta u Rijeci, časopis za ekonomsku teoriju i praksu [Proceedings of Rijeka Faculty of Economics, Journal of Economics and Business]*, 31(1), 103-125.

13 2020 United Nations E-Government Survey - Digital Government in the Decade of Action for Sustainable Development.

14 Taylor, J. A. (2006) Citizen-centric e-Government: a contradiction in terms?, In: Halpin, E., Griffin, D., Trevorrow, P. (eds.) *The E-Government Reader: The Impact of Electronic Public Administration; Theory and Practice*, (Basingstoke: Palgrave).

15 2020 United Nations E-Government Survey - Digital Government in the Decade of Action for Sustainable Development.

16 Methodological Instruction on the Use of Professional Terms in the Field of Informatisation of Society, www.informatizacia.sk (September 9, 2021).

17 Act No 305/2013 Coll. on the electronic form of exercising the powers of public authorities and on amending and supplementing certain acts.

18 Strategy for the Informatisation of Public Administration approved by Government Resolution No. 131/2008 on 27 February 2008.

19 The Strategy of the Digital Transformation of Slovakia 2030, https://www.mirri.gov.sk/wp-content/uploads/2019/10/SDT-English-Version-FINAL.pdf (September 9, 2021).

20 European Commission: Digital Public Administration Factsheets -Slovakia, https://joinup.ec.europa.eu/sites/default/files/inline-files/Digital_Public_Administration_Factsheets_Slovakia_vFINAL.pdf (September 9, 2021).

21 The Strategy of the Digital Transformation of Slovakia 2030, https://www.mirri.gov.sk/wp-content/uploads/2019/10/SDT-English-Version-FINAL.pdf (September 9, 2021).

22 Act No. 95/2019 Coll. on information technology in public administration and relevant implementing rules within the scope of the conditions under Directive (EU) 2016/2102.

23 Act No. 275/206 Coll. on information systems in public administration.

24 Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market.

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Post COVID-19 world and potential compensatory tax instruments in the context of the digital economy[1]

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Abstract: The year 2020 will mainly be associated in world history with the beginning of the COVID-19 pandemic. The shutdown of the economies of nation states and other measures taken to prevent the spread of the dangerous contagious disease of COVID-19 have caused considerable (and not only) economic problems for states as well as for individuals. It is therefore clear that this situation will also affect public budgets, both in terms of revenue and expenditure (e.g. the state incurs higher expenditures to compensate for the adverse effects of the pandemic on the private sector). The situation will certainly be a basis for reflection and reassessment of the current tax system, and it is possible that its impact will contribute (among other things) to the introduction of new taxes, the essence of which could be based on the digital economy. The paper deals with this issue, in which the authors set themselves the goal of verifying the hypothesis of whether the COVID-19 disease pandemic will be a stimulus for the introduction of so-called digital taxes.

Keywords: Tax, tax law, digital tax, virtual currency, digital services tax, COVID-19

INTRODUCTION

The world is currently facing an enemy causing far-reaching consequences in all spheres of life. This enemy is the infectious disease COVID-19, caused by a coronavirus called SARS-CoV-2.[2] Without explaining at this point what this viral infection is, and how it manifests itself, we must say that this is a global situation which humanity has not yet faced in modern history in such a negative dimension.

The global aspect also emphasises that the World Health Organization has identified COVID-19 as

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a pandemic.[3] The negative health aspects of this pandemic are the most important, of course, but this disease has also indirectly and significantly affected other areas, in particular national economies, which have taken (and are taking) various measures to prevent the spread of the dangerous human infectious disease COVID-19 and mitigate the consequences caused by it.

Measures have been taken by different countries at different intervals, as well as in different forms, from the complete closure of economies to less-intensive measures that have not affected individuals on a large scale. The governments of individual states did not shy away from closing borders either, which caused problems for open economies such as the Slovak Republic, whose GDP is largely made up of exports to other countries.

The lack of funds does not cause problems only on the part of natural persons or legal persons, but also on the part of states that lose enormous tax receipts, which form the revenue part of public budgets. On the other hand, it is the states that incur higher costs in dealing with the adverse consequences of the COVID-19 pandemic.

The situation will certainly provide a basis for reflection and reassessment of current tax systems, while it is possible that its impact will contribute (among other things) to the introduction of new taxes, the essence of which could be based on the digital economy. This paper deals with the mentioned issue, in which the authors set themselves the goal of verifying the hypothesis of whether the COVID-19 pandemic will be (and whether it can be) a stimulus for introducing so-called digital taxes.

To achieve this goal and verify the established hypothesis, we used several methods of writing scientific papers, but especially analysis, to assess the situation caused by COVID-19; this allowed us to formulate specific conclusions in relation to the researched issues and to a lesser extent the method of comparison and description. Therefore, the very introduction of tax instruments mentioned in the article can be a unique opportunity to create and introduce new forms of EU-budget own resources that could be eligible to meet all the evaluation criteria for such EU-budget own resources and could be in line with current EU policies.

We would also like to start by saying that although the paper was created during the ongoing COVID-19 pandemic, the title of the paper corresponds to our intention to address possible developments after it ends, with an emphasis on tax law and its links with the digital economy.

BRIEFLY ABOUT THE ECONOMIC CONSEQUENCES OF THE COVID-19 PANDEMIC

After the partial stabilisation of the health situation in society in 2020, states began to address the socio-economic impacts of the pandemic too, and the measures that the states had to take. Their responses to stimulus measures have been adopted at different intervals and to different extents, and the economic consequences vary depending on that.

Even though economic reactions have been rapid in some cases, the economies of all Member States will surely face a slump of historical proportions. According to previous and present forecasts, the recession should affect the economies of all Member States of the European Union (hereinafter also referred to as the "*EU*").

In this sense, the Commission's statement can be highlighted: "*The EU executive expects the eurozone economy to decline by a record 7.75 percent in 2020 and to grow by 6.25 percent in 2021.*"[4] It is also interesting to note that the forecasts for EU economic growth are currently 9 percentage points lower than in the autumn 2019 forecast.[5]

One of the EU's initial responses was the communication from the Commission of 13 March 2020 - Coordinated economic response to the COVID-19

outbreak,[6] which projected a 1% drop in GDP for 2020, without ruling out a more unfavourable economic development of the pandemic. The crisis caused by the coronavirus is compared to the economic and financial crisis of 2008 in terms of its economic consequences.

The next step at the EU level was activating the so-called general escape clause (hereinafter also referred to as the "*Clause*"), as part of the communication from the Commission on the activation of the general escape clause of the Stability and Growth Pact of 20 March 2020.[7] A clause within the meaning of the relevant provisions of Council Regulation (EC) No 1466/97,[8] Council Regulation (EC) No 1467/97[9] facilitates the possibility of coordinating the budgetary policies of the EU Member States in times of rapid economic downturn.

In addition to the aforementioned transnational response, the Council for Budget Responsibility of the Slovak Republic (hereinafter "*CBR*") prepared a paper in 2020 entitled "*Quantification of measures to mitigate the effects of the spread of the infectious disease COVID-19*", which captures the impact of the COVID-19 pandemic on the Slovak economy. This document will be continuously updated with new information available on economic development as well as administrative data and the costs associated with pandemic developments, the amount of which will depend on government measures.

The CBR estimates that in the Slovak Republic, the economy will decline by 10.3% in 2020.[10] The decline is not definitive and depends directly on the development of the epidemiological situation in the Slovak Republic and on the development in the countries that are important trading partners. In view of this, the CBR cannot currently forecast further economic development accurately.

It should be added that despite the fact the situation was quite stable upon processing the CBR material, at the time of writing this paper the epidemiological situation in the Slovak Republic is deteriorating significantly and other restrictive measures have been taken, which will affect our economy. In addition, further restrictive measures can be expected.

One directly related issue is the impact of the pandemic on tax revenues in 2020, which by their nature represent the most significant revenue of the state budget. The current negative development can therefore be demonstrated by the following example. Act no. 468/2019 Coll. on the state budget for 2020 as amended by Section 1(1) in the first sentence with effect from 5 August 2020 stipulates that: "*The total revenues of the state budget for 2020 shall be budgeted at EUR 14,366,446,802*". Annex no. 1 to said Act with effect from 5 August 2020 specifies the estimated tax revenues that total EUR 11,546,644,000, which in percentage terms represents 80.37% of the total expected revenues. The severity of the overall situation is illustrated by the fact that when budgeting revenues before the amendment to the law in question took effect (i.e. from the period before 5 August 2020), much higher tax revenues were assumed. Pursuant to the previous regulation, the provision of Section 1(1) of the first sentence of Act no. 468/2019 Coll. on the state budget for 2020 stipulated: "*The total revenues of the state budget for 2020 shall be budgeted at EUR 15,792,695,566*", and thus the revenues for 2020 were budgeted or expected at a higher amount, namely EUR 1,426,248,764 more. According to Annex no. 1 effective until the adopted amendment to the law, tax revenues of EUR 12,817,470,000 were assumed from this, and thus the revenue from tax revenues for 2020 was originally to be EUR 1,270,826,000 higher.

According to the CBR estimate, the negative impact of the COVID-19 pandemic on taxes and levies in 2020 is estimated at EUR 3,511 million.[11] The largest shortfalls will particularly be in the area of income-related tax revenues, namely personal income tax and corporate income tax, but also VAT as an indirect general excise duty.

It is therefore natural that individual states, including the Slovak Republic, will be forced to seek certain conceptual solutions. It should be pointed out in this context that EU leaders agreed on 21 July

2020 on the so-called comprehensive package of up to EUR 1,824.3 billion. This package includes both a multiannual financial framework (also known as the "*MFF*") and an EU Next Generation instrument.[12] However, in this article we will focus on the potential tax revenues that are related to and associated with the digital economy, without going into a more detailed discussion of the EU's comprehensive package, its assumptions and conclusions.

POTENTIAL COMPENSATORY TAX INSTRUMENTS IN THE CONTEXT OF THE DIGITAL ECONOMY

All the countries concerned will have to deal with the consequences of the COVID-19 pandemic, in particular with regard to public revenue shortfalls. There are several possible solutions, which we will explain briefly. Despite the fact that states have different compensatory instruments available in different areas (e.g. compensatory measures in the social field, in the economic field, etc.), in this article we will limit ourselves to potential tax instruments only.

Through their normative activities, states influence individual elements of tax law relations,[13] but at the same time they are also entitled to introduce new taxes and fees.[14] This right gives the possibility for states to react promptly to the situation and to take appropriate measures in the field of tax law.

It is the Industrial Revolution 4.0 (or even the Digital Revolution) that represents a relatively new process in our lives and at the same time provides opportunities from the point of view of states to compensate for the adverse effects of the COVID-19 pandemic. Within the legal system, the digital revolution has also affected tax law and has brought, brings and will bring many changes in the future due to a new and innovative view of life, work and mutual communication.

It is true that technological progress may, in some respects, signify a threat to the state, but on the other hand it is also a challenge and an opportunity to seek and find new ways to secure higher public budget revenues. In our view, technological progress in the post-COVID-19 period represents a challenge and an opportunity to compensate for the public revenue shortfalls we mentioned in the previous text.

However, several questions arise in this context. Is it more appropriate to introduce new taxes or maintain existing tax instruments that would be subject to the reform process? Should these be unilateral models, models within the EU, or international models of taxation for the digital economy beyond the borders of the EU? There is no doubt that these are very difficult and complicated issues, and we are aware that it is necessary to initiate and carry out professional and scientific consultations on these issues across society.

In our view, these are the key areas that could be identified in the context of taxation for the digital economy (and which should be given more attention by tax law science), namely:
- taxation of digital services,[15]
- taxation of the shared economy[16] and
- taxation of virtual currencies.[17]

From these areas, the taxation of digital services is an increasingly discussed issue at the national level, but also at the European level, yet so far states have not found a consensus for it, which we discuss in the next part of this paper with an emphasis on the general theoretical background of the issue.

DIGITAL TAX - CONCEPT, SUBSTANCE AND SPECIFIC TYPES

One of the basic tasks and goals of the science of tax law is also the elaboration of the relevant terminology (and its constant updating), which is

used in tax law and is associated with tax law issues, or which is used by the professional as well as by the lay public. The digital economy also introduces new terms, which are often used in various senses. There may be fundamental reservations about this incorrect ambiguous perception of concepts. We therefore consider it a necessary and current task of the science of tax law to pay due attention to the concept of *digital tax*.

In this part we will focus on the concept of digital tax and on identifying its position in the theory of tax law. The digital tax as such is intrinsically linked to the taxation of the digital economy, and therefore its definition and inclusion will also be important for a proper understanding of the examination of problematic aspects of taxation regarding the above-mentioned phenomena in the digital economy.

To consolidate the content of the *digital tax* concept properly, it is necessary to define the concept of *tax*, which will be the starting point for the term *digital tax*. According to the definition of Prof. V. Babčák,[18] tax can be described as *"(...) a non-refundable monetary payment, which is imposed by a law or on the basis of a law to cover state or other public needs, usually at a predetermined amount and due date*."[19] The authors want to emphasise that there are several variations on the definition of this concept in question, with none of them claiming to be absolutely and irrefutably complete.

The quoted definition of the concept of *tax* creates a certain basis and boundaries for the conceptual definition of *digital tax,* while respecting the peculiarities associated with it. The *digital tax* represents a kind of scientific concept, or construct, which, not only for the purposes of this article, constitutes a sub-category of tax itself. We see the need for a conceptual definition of *digital tax* especially in connection with the massive increase in the reach and importance of the digital economy in relation to traditional business models.

The term *digital tax* is a collective label for one's own tax liability as an intrinsic component of the content of a tax-legal relationship, the subject of which covers digital phenomena (including digital services, shared economy, virtual currency, or other phenomena).

From the mentioned research it is possible to derive certain defining features of the *digital tax*, which can be determined as follows:
- it is one's own tax liability (obligatory, non-equivalent, non-refundable, non-purpose and, in principle, a regularly recurring payment), and
- the objects of the tax are phenomena with a digital nature.

In view of the above, the *digital tax* can therefore be defined as a monetary payment of a non-refundable nature, which will be imposed on taxable objects of a digital nature by a law or on the basis of a law to cover state or other public needs, usually at a predetermined amount and due date.

We believe it is necessary to contribute to the precision and correct identification of taxable objects (content, teleological determination, etc.) via the members of the scientific community, and it is necessary to discuss this issue at this level, which could lead, last but not least, to improving the relevant tax as well as non-tax legislation and eliminating various interpretation and legal application problems.

The need to clarify the term *digital tax* can also be demonstrated using the following example, when, in our opinion, this term was used incorrectly and its content was narrowed. The term digital tax is used mainly (almost exclusively) in the media in connection with the taxation of digital services, and the digital tax is presented to the public with such limitations, which in our opinion is not correct.

For example, in the Czech Republic the term digital tax was used incorrectly at least in the media and demonstrably also by authorised persons – employees of the Ministry of Finance of the Czech Republic and by professional persons. Evidence of this incorrect practice is the digital tax designation used in the presentation of the legislative process for a legal act with the following exact

wording: the *Digital Services Tax Act* (which, as the name suggests, should regulate the taxation of digital services only).[20] However, digital tax, as derived from its definition, is a broader concept and includes or it applies to a wider range of taxable objects, and thus not only to digital services that the Czech legislator wants to tax.

In the remaining part of the article, we will limit our interpretation to the tax on digital services and at the same time we look at the current state of EU and Slovak legislation, while not forgetting other potential directions of initiatives in this area.

TAX ON DIGITAL SERVICES - CONCEPT, CURRENT STATE OF UNION LEGISLATION, SLOVAK LEGISLATION AND OTHER POTENTIAL DIRECTIONS

The tax instrument with probably the greatest potential to secure the revenue side of national budgets is the Digital Services Tax (DST). This should be a response to new business models that do not require a real, physical presence, but their existence depends on the so-called digital presence.

With regard to *digital services*, these can be characterised as follows: "*(...) 'digital services' means services which are delivered over the internet or an electronic network and the nature of which renders their supply essentially automated and involving minimal human intervention, and impossible to ensure in the absence of information technology (...)*".[21] This is the definition of digital services within the meaning of the Proposal for a Council Directive (EU) laying down rules relating to the corporate taxation of a significant digital presence {SWD (2018) 81 final} - {SWD (2018) 82 final} of 21 March 2018 (hereinafter also referred to as the "*DST Proposal*"), which also contains a demonstrative calculation of the services that can be subsumed under digital services. For example, the provision of digitised products in general, including software and its modifications or innovations, services ensuring or supporting the presence of businesses or individuals on the electronic network, site, services automatically generated by a computer via the internet or electronic network in response to specific data entered by the customer, etc.).

Another issue related to the conceptual definition of a tax on digital services is its potential classification within the tax system, in particular regarding its possible classification in terms of the method of direct taxation and indirect taxation. This is one of the historically oldest classification criteria, for which the answers to questions (important for their classification) regarding the transfer of the tax burden, the tax collection technique and the method of tax imposition are decisive.

At present, it is not possible to clearly answer the question raised, and the DST classification will also depend on the determination of tax technology within the framework of supranational legal regulations, or the legal regulations of the specific state in the relevant tax laws governing the taxation of digital services.

The current legislation, including tax legislation in the Slovak Republic, does not reflect all the new phenomena of the digital economy (with some exceptions, such as taxation of income associated with the implementation of relationships within virtual currencies,[22] or taxation of the so-called shared economy,[23] however, the completeness of the legal regulation of these areas is, in our opinion, insufficient in the Slovak Republic and it could be evaluated in a separate article). Digital services are no exception. The current legislation requires a reassessment of the basic principles of taxation[24] and a necessary and logical consideration of the fact that taxation should take place where value and profit are actually generated.

With regard to the taxation of digital services, recent initiatives are taking place at the level of the Organisation for Economic Co-operation and Development, at EU and national level, although it is true that COVID-19 and its consequences have

paralysed the work of all these actors on this issue.

The EU's initiatives in the field of digital economy taxation have so far made no major changes since the beginning of discussions in September 2017 held in Tallinn, organised by the Council in co-operation with the Commission (subsequently, in December of the same year, the Council approved its contribution to international discussion). It is important to note that the related legislative proposals of March 2018 have not been met with understanding by all Member States within the EU and have not yet been adopted.

In principle, however, it remains the case that states or selected international organisations are considering three options for addressing the issue of taxation of digital services, namely in the following wording and scope:

1) maintaining the *status quo*, which would mean keeping digital services out of the scope of tax regulation and outside the burden of such digital services with one's own tax liability, or
2) taxation of digital services to a limited extent, i.e. taxing only selected digital services (e.g. digital advertising), or
3) taxation of digital services in general without reducing the tax burden to selected digital services only.[25]

Although the conceptual solution has proved impossible in the past, the existence of the COVID-19 pandemic will, in our view, be a factor that will speed up thinking about digital services taxation. This will lead to a potential consensus at transnational level, after the worst and most serious consequences of the COVID-19 pandemic, and precisely in connection with the fastest possible restoration of the economic performance of states and ensuring the highest possible tax revenues. The transnational level of regulation in this area is particularly appropriate because unilateral solutions pose a risk in terms of very possibly creating barriers to trade in the European single market.

As for the situation in the Slovak Republic, we already stated earlier that Slovak tax legislation reflects the minimum, or does not reflect comprehensively on the phenomena of the digital economy. In the case of digital services, there is no legislation on their taxation.

In this context, according to the information available the Ministry of Finance of the Slovak Republic is not currently considering the introduction of a national tax on digital services or any other similar tax that would burden revenues related to selected digital services.

In our opinion, the position of the Slovak Republic is characterised by the fact that it does not reflect current trends and does not take into account the rebirth of the economic activity of the modern digital age. In general, this issue can be approached jointly with other EU Member States in the framework of uniform legislation applicable at EU level (as national taxes on digital services can indeed create some disparities within the European single market). If this is not the case, then case law of the Court of Justice of the EU may also be helpful in resolving the issue at the unilateral level, which may, through its decision-making activities, contribute to a possible future unilateral solution from the Slovak legislator and its consistency with EU law.

However, it should be emphasised for the time being (during the COVID-19 pandemic) that this issue cannot be expected to be a priority. For this reason too we have identified this tool as having potential only in the post-COVID-19 period, when countries are most likely to return to the digital economy to increase and restore public revenues to levels from before the pandemic period, and not to burden traditional forms of business and economic activity.

CONCLUSION

The digital economy introduces phenomena that inevitably involve a number of issues, including legal ones. Tax law science also occupies an irreplaceable place in this regard, as we pointed out above, and it must contribute to clarifying the used terminology, but also highlight the shortcomings of the legislation.

For this reason, in this paper we have tried to clarify the frequent concept of *digital tax* and highlight the recent legislative initiatives of the EU and the Slovak Republic in this area, aiming to verify the hypothesis of whether the COVID-19 pandemic will be a stimulus for introducing so-called digital taxes.

As for the conclusion on the hypothesis, this cannot be answered objectively in the current situation because it is not possible to predict the future with any accuracy and certainty, not only in the EU but also worldwide. However, we believe this is an issue that states will not address until after the COVID-19 period, when it will not be necessary to address other more serious and urgent problems related to the maintenance of economic and social standards.

In this respect, the current legislation (in most countries) is already obsolete and does not reflect phenomena such as expanding digital services, where the physical presence of the entrepreneur in a given state is not necessary to perform its business activities in the given state. In our opinion, however, unilateral rules are not the solution and a conceptual approach at least at Union level is desirable.

Notes

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2 Ministerstvo investícií, regionálneho rozvoja a informatizácie Slovenskej republiky. Čo je COVID-19? [Ministry of Investments, Regional Development and Informatization of the Slovak Republic. What is COVID-19?] (2020), https://korona.gov.sk/co-je-covid-19/.

3 World Health Organization (2020) WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020., https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020.

4 EURACTIV. Jarná prognóza eurokomisie: Koronavírus spôsobí najväčšiu recesiu v histórii Únie. [EURACTIV. The European Commission's spring forecast: The coronavirus will cause the biggest recession in the history of the Union.], https://euractiv.sk/section/ekonomika-a-euro/news/jarna-prognoza-eurokomisie-koronavirus-sposobi-najvacsiu-recesiu-v-historii-unie/.

5 EURACTIV. Jarná prognóza eurokomisie: Koronavírus spôsobí najväčšiu recesiu v histórii Únie. [EURACTIV. The European Commission's spring forecast: The coronavirus will cause the biggest recession in the history of the Union.], https://euractiv.sk/section/ekonomika-a-euro/news/jarna-prognoza-eurokomisie-koronavirus-sposobi-najvacsiu-recesiu-v-historii-unie/.

6 Communication from the Commission to the European Parliament, the European Council, the Council, the European Central Bank, the European Investment Bank and the Eurogroup - Coordinated economic response to the COVID-19 outbreak of 13 March 2020, COM(2020) 112 final.

7 Communication from the Commission to the Council on the activation of the general escape clause of the Stability and Growth Pact of 20 March 2020, COM(2020) 123 final.

8 Council regulation (EC) No 1466/97 of 7 July 1997 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies.

9 Council regulation (EC) No 1467/97 of 7 July 1997 on speeding up and clarifying the implementation of the excessive deficit procedure.

10 Rada pre rozpočtovú zodpovednosť. Kvantifikácia opatrení na zmiernenie dopadov rozšírenia infekčného ochorenia COVID-19. [Council for Budget Responsibility. Quantification of measures to mitigate the effects of the spread of the infectious disease COVID-19.] (2020), https://www.rozpoctovarada.sk/vo_download/ko_covid_19_20200430.pdf.

11 Rada pre rozpočtovú zodpovednosť. Kvantifikácia opatrení na zmiernenie dopadov rozšírenia infekčného ochorenia COVID-19. [Council for Budget Responsibility. Quantification of measures to mitigate the effects of the spread of infectious disease COVID-19.] (2020), https://www.rozpoctovarada.sk/vo_download/ko_covid_19_20200430.pdf.

12 Rada Európskej únie. Plán obnovy pre Európu. [Council of the European Union. A recovery plan for Europe.] (2020), https://www.consilium.europa.eu/sk/policies/eu-recovery-plan/. On this website there is a complete chronological overview of the Recovery plan for Europe.

13 By this we mean, in particular, the basic elements of tax law relations, which are the subject (entity) of the tax, the object of the tax, the tax base and the tax rate. Also see: Babčák, V. (2015) *Daňové právo na Slovensku [Tax law in Slovakia]* (Bratislava: EPOS), 122-130.

14 In the Slovak Republic, it is precisely Article 59 of the Constitution of the Slovak Republic no. 460/1992 Coll. as amended, which contains both the principle of the legality of imposing taxes and fees (taxes and fees may be levied by a law or based on a law), and also regulates the classification of taxes and fees specifically into national and local.

15 Hrabčák, L., Popovič, A. (2020) On certain issues of digital services taxes, Financial Law Review, 17(1), 52-69.

16 Hučková, R., Bonk, F., Rózenfeldová, L. (2018) Zdieľané hospodárstvo – otvorené problémy a diskusia (najmä s prihliadnutím na obchodnoprávne a daňovoprávne súvislosti) [Shared economy - open issues and debate (especially taking into account the business and fiscal context)], *Studia Iuridica Cassoviensia*, 6(2), 125-140.

17 Popovič, A., Sábo, J., Štrkolec, M. (2020) Bitcoin a jeho finančno-právne východiská [Bitcoin and its financial and legal basis] In: Suchoža, J., Husár, J., Hučková, R. (eds.) *Právo - obchod - ekonomika X [Law - trade - economics X]* (Košice: Univerzita P. J. Šafárika v Košiciach), 217-228.

18 In the Slovak Republic and surrounding countries, Prof. V. Babčák is generally considered to be the founder of the so-called Košice School of Tax Law, which presents tax law as a separate branch of law. See also: Babčák, V. (2009) Rozvoj daňového práva na Slovensku [Development of tax law in Slovakia], In: *Pocta prof. JUDr. Milanu Bakešovi, DrSc., k 70. narozeninám [Tribute to Prof. JUDr. Milan Bakeš, DrSc. on his 70th birthday]* (Praha: Leges), 22-30; Babčák, V. (2010) Formovanie a rozvoj daňového práva na Slovensku [Formation and development of tax law in Slovakia], In: *Daňové právo a jeho rozvoj v národnom a medzinárodnom kontexte Slovensku [Tax law and its development in the national and international context of Slovakia]* (Košice: Univerzita P.J. Šafárika v Košiciach), 7-26.

19 Babčák, V. (2019) *Daňové právo na Slovensku a v EÚ [Tax law in Slovakia and in the EU]* (Bratislava: EPOS), 21-23.

20 See more details: Džalavjan, V., Osička, Š. (2019) *Návrh zákona na zdanění digitálních služeb. [Bill on taxation of digital services]*, http://www.fucik.cz/publikace/navrh-zakona-na-zdaneni-digitalnich-sluzeb/; Wolf, K. (2019) *Návrh zákona o digitální dani prošel vládou, čeká jej sněmovna [The bill on digital tax has passed the government, the Chamber of Deputies is waiting for it]*, https://www.lupa.cz/aktuality/navrh-zakona-o-digitalni-dani-prosel-vladou-ceka-jej-snemovna/; Žurovec, M. (2019) *Návrh zákona o digitální dani míří do Sněmovny [The bill on digital tax is heading to the Chamber of Deputies]*, https://www.mfcr.cz/cs/aktualne/tiskove-zpravy/2019/navrh-zakona-o-digitalni-dani-miri-do-sn-36638.

21 Article 3, section 5 of the Proposal for a Council Directive (EU) laying down rules relating to the corporate taxation of a significant digital presence {SWD(2018) 81 final} - {SWD(2018) 82 final} of 21 March 2018.

22 Hrabčák, L. (2019) „Virtuálna mena" a právo ["Virtual Currency" and Law] In: Sangretová, M. (eds.) *Vplyv moderných technológií na právo: recenzovaný zborník príspevkov z vedeckej konferencie [The influence of modern technologies on law: a peer-reviewed collection of papers from a scientific conference]* (Košice, Univerzita P.J. Šafárika v Košiciach), 99-110.

23 Bonk, F. (2018) O zdaňovaní príjmov v kontextoch zdieľanej ekonomiky [On income taxation in the context of a shared economy], *Justičná revue [Judicial review]*, 70(12), 1342-1356.

24 Babčák, V. (2019) *Daňové právo na Slovensku a v EÚ [Tax law in Slovakia and in the EU]* (Bratislava: EPOS), 51-56.

25 Hrabčák, L., Stojáková, M. (2020) Digitálna ekonomika, digitálne služby a daň z digitálnych služieb-hrozba alebo výzva pre normotvorcov? [The digital economy, digital services and the tax on digital services – a threat or a challenge for legislators?], *Studia Iuridica Cassoviensia*, 8(1), 15-28.

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Recent development in restrictions of competition 'by object' in EU competition case law, and the role of Hungarian cases

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Abstract: Complying with the abstract rules of competition law has always been a challenge. The category of 'restrictions of competition by object' is precisely what facilitates compliance. However, parallel with the strengthening of compliance, much more complicated restrictions of competition cases have been dealt with by the competition authorities in the EU. In this context, the need for a precise delineation of the category of restrictions of competition by object has increased over the last ten years. The Hungarian cases have contributed significantly to the development of the European Court of Justice's case law on restrictions of competition by object. In the Hungarian cases referred for a preliminary ruling, the European Court of Justice has confirmed that the classical categories of restrictions of competition by object can be extended. However, until now, case law has not yet provided examples of this extension, only in cases where the classification of the conduct in question as restriction by object was not clear, or where it was not possible to prove sufficient harm to competition.

Keywords: EU competition law, restriction by object, Hungarian competition law cases

1. INTRODUCTION

According to Article 101(1) of the Treaty on the Functioning of the European Union (TFEU), all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market are incompatible with the internal market and are prohibited. The assessment of a restriction of competition by object under this Article has posed one of the most complex practical challenges to competition law in recent decades.[1]

In this study, I present the reasons why restrictions of competition by object have become the focus of attention, and how the practice of the Hungarian Competition Authority (GVH) in this matter has contributed to the development of European competition law practice. I will also demonstrate the consequences of the search for a way forward on the issue of restrictions by object required in Hungary so far.

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2. STRENGTHENING OF COMPETITION LAW COMPLIANCE AND ITS CONSEQUENCES

The fact that restrictions of competition by object are so much at the forefront of competition law practice and theory stems, in my view, from the spread of competition law compliance. Compliance with abstract competition rules has always been a challenge. On the one hand, this can clearly be seen in the development of Hungarian competition law from 1990 onwards. During the first decade of this period, the GVH's restrained fining practice was a deliberate decision in view of the low level of competition law awareness in Hungary.[2] On the other hand, the compliance challenges posed by abstract regulation are mitigated by block exemption regulations and, in essence, by the restriction of competition by object itself,[3] which also ensures predictability and certainty for the persons seeking compliance. Of course, the tendency on the part of competition authorities to keep infringements within the category of competition by object is understandable,[4] as in such cases there is no need to carry out difficult effect-based assessments, which can often be defended and are therefore less likely to succeed.[5] However, the clear emergence of restrictions of competition by object over the past decade may have increased deterrence and thus compliance, which has obviously also shaped the behaviour of market players. The prima facie restrictions of competition by object based on experiences are the following: horizontal price fixing,[6] market sharing[7] and output restriction.[8] This also includes vertical agreements that restrict trade between Member States, in particular absolute territorial restraints, restrictions on resale and parallel trade passive sales, including internet resale and, finally, vertical resale price maintenance.

Parallel with the strengthening of compliance, competition authorities have started to investigate not only less clear-cut behaviours, but also behaviours exerted on markets that operated in more sophisticated and complex business environments and are thus characterised by behaviours that are not easy to assess. The cases examined in this study include, for example, competition cases concerning pay-for-delay agreements in pharmaceutical patent litigation, where the foreseeability of their classification as a restriction of competition by object was highly questionable on the basis of past competition law practice.[9] On the other hand, in light of the above, it is not a coincidence that the question of identifying restrictions of competition by object arises in complex service markets such as insurance (see the Hungarian Allianz case[10]) or the financial sector (see Hungarian MIF case[11] or the Commission's CB case[12]).

The above difficulties in assessing restrictions of competition by object have been encountered not only by the Hungarian authority but also by the Commission[13] and other Member-State competition authorities as well. [14] There is no doubt, however, that the Hungarian competition cases referred for preliminary rulings on this issue have made a significant contribution to the development of European competition law practice. Both Hungarian cases referred to the European Court of Justice for a preliminary ruling concerned the insurance and financial sectors, which are complex markets. It is also significant that in these cases the European Court of Justice answers questions posed by the national court, which in many cases makes it difficult to compare the findings of such judgments with those in which the Court reviews a decision adopted by EU Commission.[15] The nature of the preliminary ruling system highlights the links between the legal assessment and the legally relevant facts, namely, that (in reversing the logical order of law enforcement) the legal reasoning behind certain legal questions presupposes certain factual assumptions, without which the question referred to cannot be answered. However, even in such cases, the European Court of Justice tries to provide theoretical guidelines for the interpretation of EU law (see the reasoning of the European Court of Justice on the MIF agreement falling within the scope of restriction by object by its very nature[16]).

3. THE HUNGARIAN INSURANCE CARTEL: ENTERING A NEW ERA?

In its decision of 21 December 2006 in Case No. Vj-51/2005, the GVH established that Allianz and Generali had infringed Hungarian competition law[17] by linking hourly repair fees to the performance achieved (undertaken) in the sale of their insurance policies. According to the decision, this behaviour was considered a restriction of competition by object. Although the original case No. Vj-51/2005 was conducted based on Hungarian competition law provisions only, the EU Court of Justice accepted the legal interpretation of the Supreme Court of Justice due to the similarity of the Hungarian and the EU provisions,[18] which concerned the assessment of vertical agreements as restriction of competition by object. The original decision in Case No. Vj-51/2005 was indeed vague on this point, referring to the effect of the agreements as a whole,[19] while the GVH considered it a restriction of competition by object that in return for the higher hourly charge the access of other insurers to car dealerships as a distribution channel was restricted to the benefit of the insurance companies concerned. The conduct subject to the proceeding was in fact a vertical restraint of competition, which according to the case-law was not considered a restriction by object even at the time of the GVH's decision.[20] In this context, it should be noted that the GVH was not the only competition authority to classify a vertical agreement with an effect-based approach as a by object restriction given its very nature. In the *Maxima Latvija* case, the European Court of Justice ruled in relation to the veto right leading to exclusivity in a Lithuanian shopping centre that this vertical agreement could only be assessed with an effect-based analysis.[21] Although not explicitly referred to by the European Court of Justice, its guidance on the effect-based analysis in this case is essentially the same as the criteria for assessing single branding vertical restriction. In fact, such an assessment would have been required in the Hungarian insurance cartel case had the European Court of Justice not used this case to establish the criteria for extending the restriction by object category. The European Court of Justice's judgment has also always been surrounded by confusion,[22] because what the Court said, and the context in which it did so, were not in line with each other. As this case was also referred to the European Court of Justice for a preliminary ruling, it is relevant here that the margin of discretion for the European Court of Justice is determined by the question posed by the national court, which in this case was solely concerned with the question of 'by object'. Therefore, in the context of the conduct in question the European Court of Justice does not mention that it is necessary to assess whether it constitutes single branding that restricts competition by effect. On the other hand, the European Court of Justice cites a number of cases (three in total) in which vertical conduct of this kind may be considered a 'by object' restriction. First, if there were evidence of a horizontal market-sharing agreement or concerted practice between the two insurers to be implemented by the vertical agreements in question.[23] The second case is where the insurance companies essentially affirmed the recommended price decisions of the motor vehicle dealers' association on hourly rates for vehicle repairs.[24] The third case is where, as a result of the vertical agreements, the competition on the relevant market is eliminated or significantly weakened, for which the existence of alternative sales channels and their importance, as well as the market power of the companies concerned, must be taken into account. It is this third case that gives rise to the most confusion in the judgment. In any event, the third case is not relevant in the context of the analysis of the effects of the agreements, but rather in the context of the analysis of the object, and therefore it contains an error.

On the one hand, this error is a basis for concluding that the scope of restrictions of competition by object can be extended.[25] On the other hand, it has been suggested that an extension of the categories of restriction by object could be possible by means of an effect-based analysis, which in turn has called into question the existence of separate restrictions of competition by effect.[26] As Advocate General Wahl stated in his Opinion in CB v

Commission one year after the Allianz case, "It is clear that the case-law of the Court and of the General Court, while pointing out the distinction between the two types of restrictions envisaged by Article 81(1) EC, could, to a certain extent, be a source of differing interpretations and even of confusion. Certain rulings seem to have made it difficult to draw the necessary distinction between the examination of the anticompetitive object and the analysis of the effects on competition of agreements between undertakings."[27]

4. EUROPEAN COURT OF JUSTICE PRACTICE FOLLOWING THE ALLIANZ CASE: CONSOLIDATION

More than a year after the judgment of the European Court of Justice in the Allianz case, the Court of Justice made its decision in the Cartes Bancaires (CB) case,[28] which is no longer a preliminary decision, but a Commission decision under the power of review. In this decision, the European Court of Justice appeared to have dispelled the above concerns raised by the Allianz decision, both on the question of extending the categories of restriction by object and on the question of effect-based analysis.

Indeed, the European Court of Justice ruled that the restriction of competition by object must be interpreted restrictively.[29] Furthermore, it can be inferred from the judgment of the European Court of Justice that under the "sufficient degree of harm" test set out in the Allianz case,[30] circumstances to be assessed[31] are not relevant to the effect-based analysis, but to the assessment of whether the agreement in question, inherently, pursues an objective by its very nature. (This conclusion was later also confirmed during the Generics [32] and MIF cases.[33]) Since the Court of Justice referred to the Allianz case in this context during the CB case, it is worth revisiting the Court's findings in the Allianz case in this respect. Accordingly, there must be a sufficient degree of harm *in terms of competition* (highlighted by me)[34] to establish a restriction of competition by object without an effect-based analysis. In other words, a restrictive interpretation of restrictions of competition by object means that it must be possible to show a prima facie adverse effect on competition.[35] Also in the Allianz case, the European Court of Justice emphasised that taking into account the economic and legal context in which the vertical agreements at issue in the main proceedings form a part – i.e. *the competition in the automobile insurance market* (highlighted by me) – are sufficiently harmful as to amount to a "restriction of competition by object".[36] This means that for qualifying a restriction of competition as 'by object' it presupposes that the conduct in question is placed in the appropriate market context and it is established that, in light of experience, competition interpreted this way reveals a sufficient degree of harm.[37] In this context, the European Court of Justice emphasises in the CB case that the question of defining the relevant market cannot be confused with the question of the market context to be considered when determining whether conduct constitutes a restriction by object, since it may also take place on a related market other than the relevant market.[38] In other words, it appears that the decision in the CB case corrects the decision in the Allianz case in that the categories of restriction by object cannot be extended, and the conducts under investigation must form part of a market context in which a substantive restriction of competition can be established under the classic categories (i.e. price fixing, market sharing, output restriction). In other words, circumstances which appeared to be an effects analysis in the Allianz case are in fact the appropriate market context for establishing restriction by object (and thus the applicable standard of proof). (This was later explicitly stated by the European Court of Justice in the Generics case.[39]) The arguments used by the Court in the CB case to reject the relevance of the BIDS judgment point to this. In particular, that, unlike the BIDS case, there was no suggestion in the CB case that the mechanism to encourage the exit of competitors was intended to bring about an appreciable change in the structure of the relevant market and that therefore, these measures show a degree of harm comparable to that of the BIDS agreement.[40] According to the European Court of Justice, meas-

ures which oblige issuers to pay money, making it difficult for new entrants to expand their acquiring activities, fall in line with the Advocate General's Opinion, "such a finding falls within the examination of the effects of those measures on competition and not of their object."[41] It is not a coincidence that following the reopened CB case[42] the General Court upheld the Commission's decision related to the effect-based approach, on the grounds that the additional fee charged to new entrants reduces the incentive to issue cards or increases the cost of issuing cards, thereby reducing the competitive pressure on market players.[43]

Following the decision on the CB case, which appeared to be a correction to the Allianz case, the possibility of expanding the categories of restriction by object seemed to be taken off the agenda. The European Court of Justice's judgment of 23 January 2018 in the Hoffmann-La Roche case – also a preliminary ruling – then raised the question of the extendibility of the restriction by object category again,[44] despite the Court's continued emphasis on the restrictive interpretation already given to the CB case.[45] In this case, the Italian competition authority established a market sharing cartel between two pharmaceutical companies aimed at disseminating misleading information about the side effects of using one of these medicines for indications not covered by the authorisation of the other medicine, in order to reduce the competitive pressure resulting from this use on the use of the other medicine. The difficulty in interpreting the European Court of Justice's judgment in this case arises from the fact that the reasoning of the European Court of Justice's judgment does not mention market sharing, yet despite its devious appearance, it clearly was.[46] In contrast to the Hungarian Allianz and Commission CB cases, this conduct did not concern part of a complex and sophisticated market, but a restriction of competition by object which was difficult to identify but could otherwise be captured. In other words, this case is also an example, like the CB decision, that there is no extension of the categories of restriction by object, it must be possible to identify the classical categories of restriction by object (price fixing, market sharing, output restriction) in a meaningful dimension of competition. This is indicated by the fact that in the present case, the European Court of Justice confirmed the relevance of the 'degree of harm' test introduced in the Allianz case, which in the CB case led to the need to place the conduct in question in the appropriate market context (to capture a meaningful dimension of competition) in order to identify it as falling within a classical restriction by object category.[47]

This was followed by a European Court of Justice decision on 30 January 2020 in the context of a preliminary ruling, also concerning the pharmaceutical market. The Generics case is an example of how a settlement agreement in the context of a serious dispute before a national court concerning a manufacturing process patent may be treated as equivalent to such market-sharing or market-exclusion agreements.[48] In this case – unlike the previous Hoffmann-La Roche case – the European Court of Justice thus expressly stated that the purpose of its analysis was not to extend the category of restriction of competition, but to examine whether the conduct in question fell within the existing category of restriction by object, which further confirmed that the path to extending the category of restriction by object as envisaged in the Allianz case did not exist. And for the purposes of identification, the "degree of harm" test set out in the Allianz case was applied in this case as well,[49] the aim of which is to place the behaviour in question in a meaningful competition dimension (context) and, in light of this, to classify the harm in one of the classical restrictions by object categories. What is so interesting about this "degree of harm" test in the Generics case is that the Court considered the reference to a pro-competitive effect as part of the background test to be applied in the context of the harm test.[50] Based on the Generics case, these effects must not only be proven, relevant and specific to the agreement concerned, but they must also be sufficiently significant.[51] However, the objective pursued by this agreement before and after this decision is a separate assessment aspect of the degree of harm assessment and not part of the background analysis.[52]

5. ANOTHER HUNGARIAN CASE: THE NEW AGE OF THE ALLIANZ CASE DOES EXIST

After such antecedents, the other Hungarian case was ruled by the European Court of Justice on 2 April 2020, also in the context of a preliminary ruling and again in relation to a complex market. In its judgment in the Hungarian MIF case, the European Court of Justice maintained that the category of restriction by object must be interpreted restrictively[53] and that the conduct in question must be placed in a market context in which, in light of experience, it must be possible to demonstrate a restriction of competition with a sufficient degree of harm.[54] At the same time, contrary to what was suggested by previous judgments, the European Court of Justice has made clear what was already stated in the first Hungarian case, namely that "it is likewise apparent from the wording of Article 101(1)(a) TFEU and, more specifically, from the words 'in particular' that, as has been stated in paragraph 54 of the present judgment, the types of agreements mentioned in Article 101(1) TFEU do not form an exhaustive list of prohibited collusion, since other types of agreements may also be classified as restrictions 'by object' where such a classification is made in accordance with the requirements stemming from the case-law of the Court recalled in paragraphs 33 to 39, 47 and 51 to 55 of the present judgment. Accordingly, nor can it be ruled out from the outset that an agreement such as the MIF Agreement may be classified as a restriction 'by object' in that it neutralised one aspect of competition between two card payment systems."[55] Thus, in the MIF case, the Court of Justice made it clear that a practice either succeeds in falling within the restriction by object category[56] or, in the absence of this, a category extension analysis must be carried out, i.e. it must be possible to show that the new type of behaviour is restriction by object because it reaches the experiential degree of harm of the classical type.[57] It is therefore no coincidence that the extension of the restriction by object category and the assessment of behaviours that cannot be clearly identified as restriction by object are the same test. This was confirmed by the European Court of Justice in the MIF case.[58] In the MIF case, the Court also confirmed what it had previously ruled in the Generics case, that an effect-based analysis is not necessary to classify an agreement as a restriction of competition by object.[59] In any event, there must be sufficiently solid and reliable experience to conclude that the agreement is by its very nature harmful to the proper functioning of competition.[60] Based on the above, there is therefore sufficient experience with the categories already known as restriction by object.[61] And in the case of non-existent types of market behaviour, this experience must be gained from an examination of whether the conduct in question is, by its very nature, sufficiently harmful to the proper functioning of competition.[62]

Although the European Court of Justice acknowledged the possibility of extending the restriction by object category in the MIF case, it remained based on the usual contextualisation of the specific conduct in question (namely the market circumstances and the dimension of competition that can be captured). In this context, the Court reviewed the way competition operates in the card payment market and concluded that there are three tangible dimensions of competition in the field of open payment card schemes: the "inter-system market", in which card schemes compete with each other, the "issuer market", in which issuing banks compete for a customer base of cardholders, and finally the "acquirer market", in which acquiring banks compete for a customer base of merchants.[63] The GVH has, moreover, distanced itself from the Commission's decision on the Mastercard case[64] and basically (but not exclusively) approached the case on a 'by object' basis. According to the Court, it is not unlawful to establish that conduct amounts to a restriction both by object and by effect, however this "in no way detracts from the obligation incumbent on that authority [or court], first, to support its findings for that purpose with the necessary evidence and, second, to specify to what extent that evidence relates to each type of restriction thus

found to exist."[65] The Commission's decision in 2007 concluded that by fixing the MIF, the MSC's minimum price setting had the effect of restricting competition for merchants arising on the side of issuers. In the Hungarian MIF case, the GVH found that setting the same indirect merchant service charge could amount to a restriction by object. However, the Court did not see in which of the above three dimensions of competition in the card payment system the standardisation of a card payment cost element (MIF) and the simultaneous setting of a minimum merchant service charge (MSC) threshold had been found to have a sufficient negative effect on competition (i.e. price fixing, market sharing, output restriction).[66] Especially since the parties argued that the fixing of the MIF did not allow the MSC to increase.[67] The fact that this particular by object restriction was not apparent does not preclude the identification of other anti-competitive objectives[68] because the Court did not have sufficient data to do so.[69] In this context, it may be relevant that the Hungarian MIF case differed from similar cases in Europe in that the MIF did not take the form of a decision by the card companies as an association of undertakings, but rather as an agreement between the two competing card companies. This is significant, also in view of the fact that the Court of Justice upheld the Commission's conclusion that the MIF was not a necessary element in the operation of the card payment system.[70] In light of this, the agreement between the two card issuers could be interpreted as an unnecessary cost element in the MIF.

In the Lundbeck case, which followed the MIF case, the European Court of Justice further confirmed the above conclusions in March 2021. On the one hand, it did not allow the extensibility of the restriction by object category to be limited by stating that reaching the appropriate degree of harm can only occur in the case of conduct which has already been sanctioned by the Commission.[71] The Court therefore emphasises that "in order for a given agreement to be characterised as a 'restriction by object', all that matters are the specific characteristics of that agreement from which must be inferred the potential harmfulness of that agreement for competition, where necessary as a result of a detailed analysis of that agreement, its objectives and the economic and legal context of which it forms part."[72] On the other hand, it has been further confirmed that the "degree of harm" test required to qualify as a restriction of competition by object and the effects-based infringement analysis have different content when the Court of Justice underlined that "an examination of the 'counterfactual scenario', the purpose of which is to make apparent the effects of a given concerted practice, cannot be required in order to characterise a concerted practice as a 'restriction by object', since an approach to the contrary would be to deny the clear distinction between the concepts of 'restriction by object' and 'restriction by effect' which arises from the very wording of Article 101(1) TFEU".[73]

6. CONCLUSIONS

Over the last decade, as competition law compliance in the field of competition restrictions has strengthened, competition authorities have turned to competition law investigations of practices that are less clear-cut. On the other hand, they have focused their investigations on practices in markets with more complex and sophisticated operations, which are not characterised by prima facie practices. The competition authorities are interested in establishing restriction by object, but the Court of Justice has consistently held that this category must be interpreted restrictively: "otherwise the Commission would be exempted from the obligation to prove the actual effects on the market of agreements which are in no way established to be, by their very nature, harmful to the proper functioning of normal competition."[74] The Court of Justice has therefore not been reluctant about the possibility of extending the category of restrictions of competition by object and has sought to provide guidance on this, even if the interpretation of these restrictions has been the subject of much uncertainty over the last ten years, and has been the victim of some cases.

Since the European Court of Justice's judgment in the Hungarian insurance cartel case, anti-competitive by object is an open category: the competition authority or the court may also declare market conduct as anti-competitive by object that is not yet characterised as having an anti-competitive object. In addition, a distinction must be made between *prima facie* and *non prima facie* restrictions of competition by object.[75] In the *prima facie* category of restrictions of competition by object, there is a sufficiently strong and substantial body of evidence to show that the agreements in question can be regarded as generally and objectively anti-competitive.[76] Where the classification of a conduct as restriction by object is not clear or is explicitly aimed at recognising an as yet unknown type of restriction by object conduct, it must be shown to be sufficiently harmful to competition on the basis of the case law of the Court of Justice. Both the non prima facie consideration and the category extension need the same assessment. This does not require an effect-based analysis, but the ability to demonstrate the market and economic context in which the conduct concerned fits, capturing a substantive dimension of competition whose sufficient harm can be shown by experience to be comparable to prima facie restrictions of competition by object. Case law to date has not provided any examples of an extension of the category of classic (known so far) restrictions of competition by object. The case law to date has either covered the assessment of by object restrictions that are difficult to identify (see pay-for-delay agreements in patent disputes) or has covered conduct whose harm was not apparent once it was placed in the appropriate economic and market context (see Hungarian cases). It is highly questionable whether there are further cases of the category of restrictions of competition by object, as confirmed in principle by the European Court of Justice in Hungarian cases.

Notes

1 Bailey, D. (2012) Restrictions of competition by object under Article 101 TFEU, *Common Market Law Review*, 49(2), p. 559-599.

2 For more details see.: Tóth, A. (2014) Hungarian experiences on the role of the competition policy in a transitional economy, Korea Economic Law Journal, 13(3), p. 123-138.

3 For more details see: Tóth, A. (2019) Vélelmek a versenyjogban [Presumptions in competition law], *Magyar Jog [Hungarian Law]* 66(3), 125-131; and Koivusalo, J. (2021) The pursuit of an anti-competitive outcome – restrictions of competition by object after GUK and Budapest Bank, *ECLR,* 42(6), 316.; Nagy, Cs. I. (2019) Anticompetitive object/effect: An overview of EU and national case law, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3470689 (October 31, 2019.).

4 Monti, G. (2020) EU Competition Law and the Rule of Reason Revisited https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3686619 (September 4, 2020.).

5 CJEU judgment no. C-58/64 (1965), p. 342. https://curia.europa.eu/juris/showPdf.jsf?text=&docid=87319&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

6 Experience shows that such behaviour leads to a reduction in production and an increase in prices, and leads to an unfavourable allocation of resources, in particular to the detriment of consumers. (Judgment of 11 September 2014, CB v Commission, C-67/13 P, EU:C:2014:2204, paragraph 51; Judgment of 26 November 2015, Maxima Latvija, C-345/14, EU:C:2015:784, p. 19.)

7 CJEU judgment no. C-172/14 (2015), p. 32. https://curia.europa.eu/juris/document/document.jsf?text=&docid=165909&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

8 CJEU judgment no. C-286/13 P (2015), p. 115. https://curia.europa.eu/juris/document/document.jsf?text=&docid=163028&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

9 CJEU judgment no. C-591/16 P (2021), p. 148. https://curia.europa.eu/juris/document/document.jsf?text=&docid=239291&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2727268

10 CJEU judgment no. C-32/11 (2013), https://curia.europa.eu/juris/document/document.jsf?text=&docid=135021&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

11 CJEU judgment no. C-228/18 (2020), https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2726605

12 CJEU judgment no. C-67/13 P (2014), https://curia.europa.eu/juris/document/document.jsf?text=&docid=157516&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

13 CJEU judgment no. C-67/13 P (2014), https://curia.europa.eu/juris/document/document.jsf?text=&docid=157516&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632; CJEU judgement no. C-307/18 (2020), https://curia.europa.eu/juris/document/document.jsf?text=&docid=222887&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

14 CJEU judgment no. C-345/14 (2015), https://curia.europa.eu/juris/document/document.jsf?text=&docid=172145&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

15 See e.g. the Allianz case, where the judge only asked about restriction by object while the conduct was effect-based, or the Italian Hoffmann La-Roche case, which the Italian competition authority initially identified as market sharing, but the questions asked by the Italian judge did not suggest this at all.

16 "The question is therefore raised whether an agreement such as the MIF Agreement may be regarded as falling within the scope of indirect price fixing, for the purposes of that provision, in that it indirectly determined the service charges." CJEU judgment no. C-228/18 (2020), p. 62. https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2726605

17 The GVH found that EU competition law was not applicable due to the limited cross-border trade in insurance products. Gazdasági Versenyhivatal [Hungarian Competition Authority] decision no VJ/51-184/2005. p. 482.

18 In Case C-32/11 Allianz Hungária Biztosító Zrt. and Others v GVH, the Curia ruled on the relationship between Article 101 TFEU and Article 11 of the Hungarian Competition Act as follows: *"The Supreme Court notes, first of all, that the wording of Article 11(1) of the Competition law is almost identical to that of Article 101(1) TFEU and that the interpretation of Article 11 of the Competition law, which will ultimately be adopted with respect to the agreements at issue, will in the future also have an impact on the interpretation of Article 101 TFEU in this Member State. This Court points out that there is a clear interest in having a uniform interpretation of the provisions and concepts of European Union law."* Or see also Case C-542/14 SIA "VM Remonts and Others v Latvian Competition Council 17. *According to the settled case-law of the Court, "it is clearly in the interest of the European Union that, in order to forestall future differences of interpretation, provisions or concepts taken from EU law should be interpreted uniformly, irrespective of the circumstances in which they are to apply (see in particular the judgment of 14 March 2013 in Allianz Hungária Biztosító and Others, C 32/11, EU:C:2013:160, 20. paragraph 18; judgment of 4 December 2014 FNV Kunsten Informatie en Media, C 413/13, EU:C:2014:2411, paragraph 18; judgment of 26 November 2015 Maxima Latvija, C 345/14, EU:C:2015:784, p. 12)."*

19 See Vj-51/2005. point 335, without revealing the horizontal link between insurers, cf. judgment of 14 March 2013 in Case C 32/11 Allianz and Others v Gazdasági Versenyhivatal ECLI:EU:C:2013:160, p. 45.: *"It is for the referring court to check the accuracy of those claims and, to the extent that it is enabled under domestic law, to determine whether there is enough evidence to establish the existence of an agreement or concerted practice between Allianz and Generali."*

20 For more details Nagy, Cs. I. (2021) *A kartelljog dogmatikai szerkezete [The dogmatic system of cartel law]*, (HVG-Orac) 157.

21 CJEU judgment no. C-345/14 (2015), https://curia.europa.eu/juris/document/document.jsf?text=&docid=172145&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

22 see Nagy, Cs. I. (2019) Anticompetitive object/effect: An overview of EU and national case law, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3470689 (October 31, 2019.).

23 CJEU judgment no. C-32/11 (2013), p. 45.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=135021&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2727791

24 CJEU judgment no. C-32/11 (2013), p. 49-50.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=135021&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2727791

25 Gál, G. (2020) Card trick: The Judgment of the Court of Justice of the European Union in the Budapest Bank case (C-228/18), European Mirror, 23(3), 46.

26 See Dömötörfy, B., Kiss, B. S., Firniksz, J. (2020) Látszólagos dichotómia? Versenykorlátozó cél és hatás vizsgálata az uniós versenyjogban, különös tekintettel a budapest Bank ügyre, Verseny és szabályozás [An apparent dichotomy? Examining by object and by effect restrictions in EU competition law, with particular reference to the Budapest Bank case, Competition and Regulation], In: Valentiny, P., Nagy, Cs. I., Berezvai, Z. (eds.) *Verseny és szabályozás 2019. [Competition and regulation 2019.]* (Budapest: MTA KRTK Közgazdaság-tudományi Intézet), 32.

27 Opinion of Advocate General Michal Bobek in Case C-228/18 (2019), p. 46. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:62018CC0228&from=EN

28 CJEU judgment no. C-67/13 P (2014),
https://curia.europa.eu/juris/document/document.jsf?text=&docid=157516&pageIndex=0&doclang=HU&mode=lst&dir=&occ=-first&part=1&cid=2728503

29 CJEU judgment no. C-67/13 P (2014), p. 58.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=157516&pageIndex=0&doclang=HU&mode=lst&dir=&occ=-first&part=1&cid=2728503

30 "According to the case-law of the Court, in order to determine whether an agreement between undertakings or a decision by an association of undertakings reveals a sufficient degree of harm to competition that it may be considered a restriction of competition 'by object' within the meaning of Article 81(1) EC, regard must be had to the content of its provisions, its objectives and the economic and legal context of which it forms a part. When determining that context, it is also necessary to take into consideration the nature of the goods or services affected, as well as the real conditions of the functioning and structure of the market or markets in question" CJEU judgment no. C-67/13 P (2014), p. 53.

31 Regard must be had to the content of its provisions, its objectives, and the economic and legal context of which it forms a part. When determining that context, it is also necessary to take into consideration the nature of the goods or services affected, as well as the real conditions of the functioning and structure of the market or markets in question.

32 CJEU judgment no. C-307/18 (2020), p. 104.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=222887&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

33 CJEU judgment no. C-228/18 (2020), p. 76.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

34 CJEU judgment no. C-32/11 (2013), p. 34.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=135021&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632 p. 58.

35 see CJEU judgment no. C-67/13 P (2014).

36 CJEU judgment no. C-32/11 (2013), p. 46.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=135021&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

37 CJEU judgment no. C-67/13 P (2014), p. 51.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=157516&pageIndex=0&doclang=HU&mode=lst&dir=&occ=-first&part=1&cid=2728503

38 CJEU judgment no. C-67/13 P (2014), p. 77-78.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=157516&pageIndex=0&doclang=HU&mode=lst&dir=&occ=-first&part=1&cid=2728503

39 CJEU judgment no. C-307/18 (2020), p. 104.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=222887&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

40 CJEU judgment no. C-67/13 P (2014), p. 85.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=157516&pageIndex=0&doclang=HU&mode=lst&dir=&occ=-first&part=1&cid=2728503

41 CJEU judgment no. C-67/13 P (2014), p. 81.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=157516&pageIndex=0&doclang=HU&mode=lst&dir=&occ=-first&part=1&cid=2728503

42 General Court judgment no. T-491/07 RENV (2016),
https://curia.europa.eu/juris/document/document.jsf?text=&docid=181045&pageIndex=0&doclang=FR&mode=lst&dir=&occ=-first&part=1&cid=2724836

43 Ronzano, A. (2016) Restriction by effect: The General Court of the European Union confirms the tariff measures by the French interbank network effectively restricted competition after the ECJ ruled that they had no restrictive object (Groupement des cartes bancaires), *Concurrences,* 2016/3, www.concurrences.com

44 Nagy, Cs. I. (2019) Anticompetitive object/effect: An overview of EU and national case law, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3470689 (October 31, 2019.).

45 CJEU judgment no. C-179/16 (2018), p. 78.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=198644&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2724836

46 Nagy, Cs. I. (2021) *A kartelljog dogmatikai szerkezete [The dogmatic system of cartel law]* (Budapest: HVG-Orac), 161.

47 CJEU judgment no. C-179/16 (2018), p. 94.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=198644&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2724836

48 CJEU judgment no. C-307/18 (2020), p. 77.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=222887&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

49 CJEU judgment no. C-307/18 (2020), p. 103.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=222887&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

50 CJEU judgment no. C-307/18 (2020), p. 103.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=222887&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

51 CJEU judgment no. C-307/18 (2020), p. 106.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=222887&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

52 See from previous case law: CB, points 54 and 70, from subsequent case law: MIF, points 51 and 52, and the Lundbeck judgment summarising the harm test: "Only the specific characteristics of an agreement are relevant for the classification of a given agreement as a "restriction by object" (see in this sense: 2020. Generics (UK) and Others, judgment of 30 January 2010, C 307/18, EU:C:2020:52, p. 84 and 85), on the basis of which it is necessary to infer the specific harm that may exist from the point of view of competition, if necessary, after a detailed analysis of the agreement, its objectives and the economic and legal context in which it forms a part." p. 131.

53 CJEU judgment no. C-228/18 (2020), p. 54.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

54 see CJEU judgment no. C-228/18 (2020), p. 35, 51-52, 54 and 80.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

55 CJEU judgment no. C-228/18 (2020), p. 63.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

56 CJEU judgment no. C-228/18 (2020),
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632 p. 62.: MIF Agreement may be regarded as falling within the scope of indirect price fixing "in that it indirectly determined the service charges."

57 CJEU judgment no. C-228/18 (2020), p. 63.
"In addition, it is likewise apparent from the wording of Article 101(1)(a) TFEU and, more specifically, from the words 'in particular' that, as has been stated in paragraph 54 of the present judgment, the types of agreements mentioned in Article 101(1) TFEU do not form an exhaustive list of prohibited collusion, since other types of agreements may also be classified as restrictions 'by object' where such a classification is made in accordance with the requirements stemming from the case-law of the Court recalled in paragraphs 33 to 39, 47 and 51 to 55 of the present judgment. Accordingly, nor can it be ruled out from the outset that an agreement such as the MIF Agreement may be classified as a restriction 'by object' in that it neutralised one aspect of competition between two card payment systems."
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

58 CJEU judgment no. C-228/18 (2020), p. 51, 52 and 59.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

59 CJEU judgment no. C-228/18 (2020), p. 76.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

60 CJEU judgment no. C-228/18 (2020), p.76.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

61 CJEU judgment no. C-228/18 (2020), p. 36.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

62 CJEU judgment no. C-228/18 (2020), p. 79.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

63 CJEU judgment no. C-228/18 (2020), p. 56t.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

64 European Commission decision in Case COMP/34.579 https://ec.europa.eu/mwg-internal/de5fs23hu73ds/progress?id=2KvUMjpEKzVd1bvtIcEypVw-ZLOUGlW6c5lOD3zYoKs

65 CJEU judgment no. C-228/18 (2020), p. 43.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

66 Koivusalo, J. (2021) The pursuit of an anti-competitive outcome – restrictions of competition by object after GUK and Budapest Bank, *European Competition Law Review,* 42(6).

67 CJEU judgment no. C-228/18 (2020), p. 82.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

68 CJEU judgment no. C-228/18 (2020), p. 52.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

69 CJEU judgment no. C-228/18 (2020), p. 78.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=224884&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

70 CJEU judgment no. C-382/12 P (2014),
https://curia.europa.eu/juris/document/document.jsf?text=&docid=147066&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2727388

71 CJEU judgment no. C-591/16 P (2021), p. 130t.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=239291&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2727268

72 CJEU judgment no. C-591/16 P (2021), p. 131.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=239291&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2727268

73 CJEU judgment no. C-591/16 P (2021), p. 140.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=239291&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2727268

74 CJEU judgment no. C-32/11 (2013), p. 58.
https://curia.europa.eu/juris/document/document.jsf?text=&docid=135021&pageIndex=0&doclang=EN&mode=lst&dir=&occ=-first&part=1&cid=2459632

75 Ibáñez Colomo, P. (2019) Legal Tests in EU Competition Law, Taxonomy and Operation, Journal of European Competition Law & Practice, 10(7).

76 Opinion of Advocate General Michal Bobek in Case C 228/18 (2019), p. 54 and 63-73, https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:62018CC0228&from=EN

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Monography Review Michal Radvan – Czech Tax Law

JIŘÍ KAPPEL

Last year, Masaryk University Press published a fourth edition of Michal Radvan's monography entitled Czech Tax Law.[1] As this edition reflects development in Czech tax legislation until September 2020, it is one of the very few recent sources focusing on the subject matter.[2] Although the publication is originally intended as information for international students, it provides a relatively comprehensive overview of the Czech tax system that can also be used for practical purposes.

Due to the author's academic background and publishing experience, the publication is well-structured; the author proceeds from general concepts such as the position of tax law in the Czech legal system, and its internal structure, to more specific issues of substantive and procedural tax law. The issues addressed are not merely approached descriptively, as could be expected from educational guidance, the author also provides a number of critical comments from both a theoretical and practical perspective.

This combined approach is already demonstrated in the first chapter where the author defines tax law as an independent branch of law based on its specific object, method of legal regulation, system coherence and social acceptance. Mainly in the part addressing the last criterion, the author makes a comparative evaluation of the long-term academic discussion between Czech (and Central European) scholars on the independence of tax law (from financial law) and its general acceptance, and provides theoretical and practical comments in favour of the shift towards recognising Czech tax law's independence. Similarly, the author analyses the notion of a tax and a charge in the second chapter, and formulates the basic structural components of taxes.

In the subsequent chapters the author approaches all respective taxes and charges by discussing their basic structural components and lists other related essential rules. Simultaneously, the author draws readers' attention to specifics of Czech tax law, such as the preference of taxpayers for independent entrepreneur status over employment due to the more beneficial personal income tax and social security and health contribution rules.

Due to the publication's closing date, some of the amendments introduced by recent acts[3] in 2021 could not be reflected. These amendments include the abolition of the super-gross wage partial tax base in the case of income from dependent activities in favour of the standard gross wage, the introduction of the exempt flat-rate meal contribution, substituting the solidarity surcharge with two progressive rates applicable to all partial personal income tax rate bases, or the increase in basic tax reduction and tax preferences for children. The publication also covers the quite intensively discussed issue of social security and health contributions[4] and the author, quite rationally, argues that these contributions should be considered taxes as they meet the basic structural components of taxes. Readers might also find insightful the

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author's discussions on the advantages and disadvantages of the Czech immovable property tax or the purpose of the energy taxes.

In conclusion, the publication not only provides a comprehensive overview of the Czech tax law and system, it also includes comments on its most intensively discussed issues which might be particularly illuminating for the intended audience. Furthermore, it can be assumed that more interesting issues will arise with the implementation of the planned global reform of corporate taxation, which would have to be reflected in a future edition of this publication.

Notes

1 Radvan, M. (2020) Czech Tax Law (Brno: Masaryk University).

2 See also Mrkývka, P., Radvan, M., Pařízková, I. (2020) *Finanční a daňové právo [Financial and tax law]* (Plzeň: Nakladatelství Aleš Čeněk); or Vančurová, A., Láchová, L., Zídková, H. (2020) *Daňový systém ČR 2020 [Tax System in CR 2020]* (Praha: Wolters Kluwer).

3 E.g. Act no. 609/2020 Coll., as amended.

4 As discussed at the 2005 annual meeting of the European Association of Tax Law Professors in Naples.

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The place of data in precision agricultural data asset management

SÁNDOR NEUBAUER

Abstract: Data and information are both key players of the 21st century. Technology is rapidly changing, and the industrial revolution is represented in the field of agriculture as well. Precision farming helps farmers to maximise annual yields and use available data. Due to technological developments and data management, more and more information is available. Precision agriculture manages the variability in production agriculture in a more economic and environmentally efficient manner. It encompasses a suite of farm-level information technologies, monitors the major field crops and annual yields. Precision agriculture can survive only by using the data and information gained.

Keywords: precision agriculture, data asset management, technology

Agriculture is the art and science of cultivating the soil, growing crops and raising livestock. Centuries ago, the growth of agriculture contributed to the rise of civilisations. Agriculture kept formerly nomadic people near their fields and led to the development of permanent villages. Farmers used their knowledge and perceptions to cultivate the land. As time passed and people became wiser, they started to share "data" about their fields, what, how and when to sow to get higher yield. The 21st century brought the real industrial revolution in agriculture, since precision farming makes agriculture as digital as possible to save time, to combat climate change and to maximise the annual yield. The fourth industrial revolution has arrived. The revolution has sparked new technological innovations in artificial intelligence, robotics, Internet of Things, unmanned vehicles or nanotechnology. National policies related to the fourth industrial revolution based on global trends are being implemented across the planet. Over 200 years ago, more than 90% of the Earth's population was engaged in agriculture, but now more than 80% of the populations of major OECD countries are engaged in the service industry. The population engaged in agriculture, at present, is merely 2-3%. The age of individuals in farming households is increasing as well. In the current world economy, only 5% of the world's population works in agriculture, yet it accounts for more than 60% of the world's business.[1]

The farmer and the land remain at the heart of agriculture, but the rules are constantly changing. Farmers play a subordinate role to technology companies, which have the platforms to collect and manage data. The ultimate goal is to ensure that the data assets are not only available for global players

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to use, but also to farmers to produce effective and usable data.[2] In order for precision agriculture to be more profitable, the focus must be on data generated during production, collection and usage.

This article aims to present the use of data and data asset management possibilities in precision agriculture by stating the main milestone and technologies until the present day.

DATA ASSET MANAGEMENT

Data is the new driver of the economy and society. It is essential for economic growth, competitiveness, innovation, job creation and social development. Sharing information has become a necessity and it matters how much and what quality of information is available to whom. One of the key factors for business success (including agricultural success) is based on the quality of the company's data assets and information. For organisations, the effective management and analysis of the data takes paramount importance. To achieve this, the data available to the company must be taken into account in the organisation's operations. Data mapping creates a data dictionary (called a metadata catalogue) that allows data sources to be registered, expanded, explored, analysed and used, contributing to data consistency and further exploitation. The aim of data asset management is to facilitate the exploitation of data assets and the provision of data at the same time. The process of data management goes beyond the concepts of data management and data processing. It is about managing data as a resource in a comprehensive, efficient and effective way. Effective data management is not a simple technical issue, it requires a multi-faceted approach to data management. Data management brings together a number of areas and can therefore be seen as a framework.[3]

PRECISION AGRICULTURE

Future agriculture is expected to evolve into high-tech industries where systems are coupled with artificial intelligence and big data. Big data challenges include capturing data, data storage, data analysis, search, sharing, transferring, visualisation, querying and updating. The data tends to refer to the use of predictive analytics, user behaviour analytics, or certain other advanced data analytics methods that extract value from data, and seldom to a particular size of data set. Precise optimisation will solve many current problems in agriculture. Precision agriculture reflects on current environmental problems on Earth, yet the production of safe agricultural products is emerging. Interest in precision agriculture is increasing to minimise environmental pollution and maximise the production of agricultural products. Precision agriculture has emerged as a solution to this need, as it can increase the production of agricultural products while reducing the amount of harmful chemicals applied to the environment.[4]

Precision agriculture is a whole-farm management approach with the objective of optimising returns on inputs, while improving agriculture's environmental footprint. It has come about through the development of information technology and remote sensing. The most widely adopted precision farming technologies are knowledge-intensive. Data on farmers' use of precision-agriculture technology are sparse as countries do not usually collect such data. The adoption of precision-agriculture technologies is limited to only a few countries and sectors. The most widely adopted precision farming technologies are GPS guidance. Precision agriculture has a substantial role to play in fostering green growth in agriculture in OECD countries, but the prevalence of small-size farms in several countries makes widespread adoption problematic.[5]

Precision farming is better described as data-based farming, as it is the key in the collection of data, the quality of the data and the accuracy of the information. Data can no longer come solely from self-collection, as there are a wide variety of data sources, such as meteorological data or satellite remote sensing data. By 2021 the Hungarian government has now created a domestic agricultural data market by linking private and public data. Hungary adopted the Artificial Intelligence Strategy[6] last autumn, and one of the pillars of the strategy was to launch agricultural data. Both data collec-

tion and data use need to be taken into account, as huge amounts of data are needed to kick-start data asset management in agriculture. Data from production can be collected and stored in a structured form, suitable for processing by technology providers and public administrations. Once the data has been processed, the information extracted can be used by producers in an appropriate way. The National Agency for Data Assets is responsible for getting the data asset off the ground at national level. In the field of agriculture, new solutions based on Hungary's Digital Agricultural Strategy will develop and ensure data collection in the public sector, which is one of the pillars of agricultural data production. The strategy launches programs to train and increase the capacity of the sector at producer level to create and interpret quality data and use it in decision-making. The primary goal of the data economy is to give producers control over their own data and the ability to transfer their data to whomsoever they want. The Artificial Intelligence Strategy includes the Agri-Data Framework, which is not a new data collector platform, but an interface that receives data firstly from public administrations and secondly from private data sets. The next stage of development is to build services on top of these data sets, such as expert advice. A common platform or data management platform, the advisory services will have complete, nationwide coverage of certain areas. The current function of agricultural data is not necessarily to give advice to the producer. In the future, data-driven extension will have the added advantage of being able to provide information on what is happening within the crop, at what price the buyer can find it on the market, and whether it meets their demand.

By managing and learning from the data, farmers can learn from each other's data. Farm management systems have access to even more data, companies offering business management software and systems can develop much better quality and more effective services. In the Netherlands, Syngenta provides data to Akkerweb[7], which is based at Wageningen University, where such large data warehouses have been operating for more than 15 years. The development of data warehousing is bringing a culture change, as agricultural operators accept and understand that their own data will not be less valuable when it is put on the data market, because they will keep it, manage it and use other data at the same time. The higher the quality of data in the dataset, the more it can be used for.

The Green Deal is the European Union's plan to move towards sustainable agriculture and food in practice. In order to make Europe climate neutral by 2050, major reforms in agriculture are needed, which can be achieved through data management. Data is essential for farmers' businesses, and it is up to them to collect it. The producer takes the data from the data storage system and uses it. Using the data extracted, the history of the farm can be traced and trends can be observed, from which analyses can be made and, ultimately, decisions can be taken.[8]

A Hungarian example for agricultural data collection and management is "Agriculture 4.0". This is a decision-supporting tool based on collecting and processing large amounts of digital agribusiness data, including "smart farming" and cloud services that enable the processing of large amounts of data. In agricultural production, the primary objective is to achieve precision farming in arable crops, livestock, horticulture, viticulture, fisheries and forestry. The profitability of precision farming is ensured by the data generated during production. The collection, processing and access to public data in this sector is a direct factor of competitiveness on the international market. Data generated in production and on the production trajectories are of strategic importance and national value. The aim is to collect and process data, to reduce the cost of access to data, and to make the necessary changes to the regulatory environment. The Digital Agricultural Reduction will reduce the administrative and other costs of the digital transformation of the agricultural economy that can be influenced by the state by significantly reducing the costs of digital access to data produced and collected by public organisations. The free availability of data from the National Meteorological Service can significantly help farmers prepare for weather anomalies and save huge amounts of money every year. Regionally speaking, Hungary's Digital Agricultural Strategy is not

a sectoral strategy in its own right, but a strategic document aligned with the sectoral objectives already set, analysing and building on them from a digitalisation perspective, which has placed Hungary among the leading countries in the European Union in terms of agricultural digitalisation objectives. The introduction of digitalisation in agriculture plays a significant role in data management, data production and processing. Digital technologies produce a significant amount of data in all areas. Data is generated from the production level through processing to trade in the context of technological operations, activities and interventions. The actors at different levels collect data and build databases, and the multiannual data series provide an opportunity to optimise activities.

The growing demand for food from a growing population, the shrinking agricultural land and water scarcity are driving the need for more efficient farming methods, which could facilitate the rapid spread of precision farming. Precision irrigation is also growing in importance due to the limited water resources available. As precision technologies evolve, further automation and linking of applications is expected. Data management will have implications for the whole agricultural value chain and will provide new business opportunities in the fields of extension, analysis and modelling. Free data from the Copernicus program is also being used to build the EU-funded APOLLO Project, involving Greece, Spain, Austria, Belgium and Serbia.[9]

Government organisations which collect or store agricultural data could work together with data providers and data users to establish clear frameworks governing data access and use. It is essential that such frameworks should be coherent with broader policies governing such issues, as well as with underlying legislation authorising government agencies to collect agricultural data. In seeking to improve publicly-held agricultural datasets, data-collection agencies can explore how the burden of existing data collection by government organisations can be lessened while maintaining or strengthening data collection through the use of digital technologies, including considering how digital tools could be used to gather data via alternative pathways. The data management framework could also support the evaluation of data quality for data from alternative sources and planning. Developing a data infrastructure might require different types of actions and roles for the government, as a coordinator, as a regulator setting interoperability standards, or to directly develop the data infrastructure and create markets for usage rights. Providing physical infrastructure such as connectivity, sensor networks and physical elements of a tracking and traceability system faces traditional issues for infrastructure in network industries. The sharing of data according to the definition and value provided to the different use of data produced by private systems remains an issue.

Good quality data is indispensable for data management, since even the most refined algorithm will not be able to provide good information. New digital technologies such as blockchain or artificial intelligence are sophisticated programs, the value of which also depends on the quality of the data they use. If bad quality data is used in automation, it can potentially have negative consequences.[10]

At the international level, the Food and Agriculture Organization of the United Nations created FAOSTAT to provide free access to food and agriculture data for over 245 countries and territories and covering all FAO regional groupings. The Agricultural Market Information System (hereinafter: AMIS) is an inter-agency platform to enhance food market transparency and policy response for food security. It provides market information on four grains that are particularly important in international food markets: wheat, maize, rice and soybeans.

The Food and Agriculture Microdata (FAM) catalogue provides an inventory of datasets collected through farm and household surveys, which contain information related to agriculture, food security and nutrition. The FAM catalogue is based on datasets which are collected directly by the FAO. The microdata contains information on individuals, households, business and geographic areas, and provides rich input into policy analysis, research, and highly disaggregated statistics.[11]

The data revolution in agriculture, information and communications technology for agricultural services can support smallholder farmers in addressing their challenges and increasing their incomes and yields. Smallholder farmers represent the biggest employment sector in rural areas of the developing world, and they are also the most important contributors to global food production. More than 90% of the farms in the world are family farms. They produce 80% of the food and operate 75% of the farmland.[12] Farm-level data is essential in delivering actionable and tailored farmer-centric services and information to individual farmers.

Many individuals and organisations collect a broad range of different types of data to perform their tasks. Government is particularly significant in this respect, both because of the quantity and centrality of the data it collects, but also because most of that government data is public, and therefore can be made open and available for others to use.[13]

The use of digital technologies and related innovation is another step in the history of offering new opportunities. Information communication technologies, including the internet, mobile technologies and devices as well as data analytics are used to improve the generation, collection, exchange, aggregation, combination, analysis, access, searchability and presentation of digital content, including for the development of services and apps. Advances in massive data acquisition, storage, communication and processing technologies have enabled the rapid transfer of vast quantities of data that would not have been possible even a decade ago, and have greatly magnified the ability to process large datasets and to automate analytical processes with machine learning. In the past, many types of agricultural data were previously held in paper-based filing systems. Digitalisation does not create new data, but rather, by converting existing data into a digital format, it allows data to be used and transferred in new ways. Having more data is not enough, but combined with progress in communication and processing capacity, this data is progressively used to create knowledge and provide advice about production processes, and even to automate some activities on farms.

Access to farm data can also improve efficiency in the management of trade regulation, particularly when trade systems are administered through the adoption of paperless trade and electronic documents. The data infrastructure is the system enabling and governing the collection, access and transfer of data (data governance) and the analysis of farm data to produce knowledge and advice and feedback loops to stakeholders in the agriculture sector, including farmers as well as policy makers.[14]

Investing in data services to provide linked datasets to increase the usefulness of government data collections for policy-making and related research. One important aspect of this to consider is how, and when, to link farm financial datasets with physical data such as soils, precipitation, and other climate variables. It is essential to increase use of secure remote access mechanisms to reduce transaction costs of allowing trusted actors such as policy researchers to access agricultural micro data held by governments, and in the near future, to explore how new data sharing technologies such as confidential computing could avoid the traditional confidentiality-accessibility dilemma.[15]

DATA MANAGEMENT

Agriculture has signalled a proliferation of connected sensors across farms and throughout value chains whose streams of data offer the allure of value to those who possess the requisite skills or acumen. The devices used in agriculture digitalise farms and create new opportunities for agricultural production systems, value chains and food systems. Data produced by Smart Farming is the core resource that enables value, is often the good exchanged, and even the currency that finances interactions throughout agricultural value webs,[16] while agricultural data is at least an asset and must be managed like any other asset. Stakeholder participation in data sharing platforms is more than transactional, value can be created from Smart Farming data as stakeholders collab-

orate around data, conduct arbitrage with data or compete for data. A data sharing platform is a community of stakeholders who share a common, data-related goal, data collected from, and for, the community, and a system that uses the data to enable and incentivise stakeholders to make valuable interactions. The operation of a data-sharing platform describes a process that takes data as one of a number of inputs and produces value as an output. Stakeholders in a data-sharing platform act like individual firms in supply chains for whom collective benefit must be achieved, not by managing individual functions but by adopting an integrated approach to their separate activities. This creation of value from data and accompanying assets is enabled by the system through the use and exchange of data.

Data-sharing platforms consist of three assets together with three management tasks that span each pair of assets to enable valuable interactions across the platform. The three core assets that data-sharing platforms rely on are: a community of stakeholders, a facilitatory system, and data on and for that community.[17]

When smart farming and precision agriculture are discussed, agri-based Internet-of-Things (IoT) devices can help farmers with real-time information about lands and crop parameters. The agri-based IoT devices are extensively utilised to collect real-time field-based and/or farmer-level data. Agri-based sensor devices allow farmers to obtain real-time information about soil, water and crop quality and help them integrate it with blockchain technology to obtain digital information assets. IoT devices can communicate with each other for the extensive farmland to broadcast transactions between IoT devices and share the results into the blockchain. When data are shared with external agencies, blockchain utilises a Resource Description Framework (RDF) linked to a graph database. Data are essential components that provide complete detail about a specific instance. In the blockchain-based agriculture value chain ecosystem, data are collected from different silos and processes. In precision farming, agriculture data and information flow comprise four stages: planning, application, result and evaluation. These stages contribute to data collection and analysis for real-time decision-making.[18]

The blockchain-based solution to store data would be easier to find and access for any other system. It should be interoperable with the existing agriculture system and easy to reuse data stored in blockchain by replacing different silos of data. Electronic agriculture data, human beings and machines should be able to find it. Once agri-data is found in blockchain, it should be accessible to various stakeholders at the protocol layer with predefined data access controls. In e-agriculture, data are generated from the different systems which are accustomed to other protocols. Agri-data consists of multiple stakeholders. Front-end applications and agri-IoT sensor devices such as GPS tracking during transportation, soil condition, and water quality data and digital machines generate data with varying degrees of layer collaboration and minimal human intervention required.[19]

LEGAL PROVISIONS

In the European Union, certain Member States enacted actions to improve digitalisation in their agricultural sectors and policy implementation in 2020. The Belgian region of Wallonia verified the validation of all farm payments using data from Copernicus Sentinel Satellites[20] in 2020, and completely replacing on-farm controls throughout the entire Wallonian territory.

In 2020, the European Commission launched a new EU Soil Observatory (EUSO). The EUSO aims to support policymaking in the European Union by providing the Commission and the broader soil user community with the soil knowledge and data flows needed to safeguard soils. The EUSO aims to collect high-resolution, harmonised and quality-assured soil information to track and assess progress by the European Union in the sustainable management of soils and the restoration of degraded soils.[21]

Besides the fact that precision agriculture equipment can reveal details about farming conditions

and techniques and other potentially sensitive business data, there is also data collected by other actors, especially the government. There is no legal protection yet for this type of sensitive non-personal data, unless they are classified as trade secrets, in which case they should not be shared. Ownership is a legal assertion and data ownership is not addressed by legislation except for copyright for datasets as intellectual products. The concept of ownership is not strictly applicable to farm data. Given the lack of legal applicability of the concept to raw data in general, machine-generated farm data presents additional complexities. It is generated on the farm and is about the farm, but it is generated by machines without the intervention of the farmers, so the farmer is not considered the generator or collector. In the beginning it is raw data, so not an intellectual product, but it is then transmitted and processed and combined with other data in aggregated datasets, which are intellectual products and can therefore be owned. The right to control assigns the right to decide on the sharing and further reuse of the data. For the further reuse of data, under personal data protection laws it is very common to apply the principle of purpose limitation, and this principle is sometimes recognised for non-personal data too. The right to access and control the data is the right to exchange the same data again with other actors. A farmer using precision agriculture equipment that collects data on soil properties, irrigation, weather and crop health may want to share this data with an insurance company to negotiate better premiums, or with a bank to demonstrate the viability of his/her business. The data probability is also linked to the issue of interoperability between farm instruments and tractors and the data they generate, which is often only compatible with other machinery of the same brand.

In many countries there are legal provisions for agricultural data asset management and data sharing. There are policies prescribing that public sector data should be open and reusable. The objective of these policies is to provide free useful data for the development of innovative services. Types of data that are useful in agriculture and are traditionally prioritised in open data policies are geospatial data, soil data and soil maps, cadastre data, weather data and price data. Open data enables access to data for the less resourced actors, like small farmers who can only get data from expensive providers.

Responsible data sharing in agricultural value chains outlines the policy spaces and instruments to be considered when dealing with farmers' data sharing. The policy spaces that are relevant here are different from those relevant for the open data lifecycle. Data shared along the value chain is normally not open and not designed for public use but for mutual transactions for the provision of specific services. Many aspects of agricultural data sharing such as attribution, access, portability, interoperability, benefits and risk of lock-in are not covered by legislation. Responsible data sharing in agricultural value chains illustrates existing examples of such instruments, such as codes of conduct and guidelines agreed upon by different value chain actors, and their potential role in making data sharing fairer. The data platform in the ecosystem can be managed by different actors and with different purposes; in most cases, farm data is still managed on technology providers' platforms, but there are examples of farm data cooperatives and the potential role of Trust Centres with trusted governance.

Agricultural data sharing does not have a dedicated policy space but there are broader policy instruments to be used to ensure fairness of farm data sharing. Public policies do not address agricultural data sharing explicitly and do not offer solutions for most of the issues highlighted in the previous sections, it is useful to be aware of the existing policy spaces to understand where these issues might be addressed, and to be able to influence these policies and push for instance for a better coverage of the data dimension in agricultural policies and the value chain and data asymmetry dimension in digital strategies.

In many countries, there are policies that prescribe public data should be open and reusable. To assess the availability of free open data and therefore to be able to determine the feasibility of services which may need additional paid data, ser-

vice providers and farmers need to be aware of the open data policies and data publication status in their country. In policy briefs the European Union policy-makers issued the 2018 EC Communication "Towards a common European data space" and the Public Sector Information Directive, which focus on reusability and the impact of data, and encourage the identification and prioritisation of high-value datasets and the publication of real-time data. A significant proportion of the data that governments have already opened or are expected to open for the benefit of farmers is quite static or changes over longer periods, like soil maps and cadastre data.

A high amount of public interest data is held by the private sector. Data that have high value to farmers is collected or aggregated by private companies, such as reliable weather data, market data, precision-agriculture aggregated data on soil, water, use of fertilisers and pesticides. Many governments are trying to negotiate the publication of private-sector data of public interest and to explore grounds in which the private sector might be willing to share data, both with other businesses and with the government to boost innovation and public interest.

In order to build and maintain trust in data, it is necessary to have stable data management principles and practices in place. Good data management principles help to ensure that data produced or used are registered, stored, made accessible for use and reuse, managed over time and/or disposed of according to legal, ethical and funding requirements as well as good practice. A data management policy can be used to address strategic issues such as data access, relevant legal matters, data stewardship issues and custodial duties, data acquisition and other issues. Effective data sharing depends on a string network of trust between data providers and consumers.[22]

Under the EU PSI Directive, any information or content accessible to citizens under the laws of a country can be recycled and shared with others. Building a European data economy is part of the Digital Single Market strategy.[23] The initiative aims to make the most of the potential of digital data for the benefit of the economy and society, removing barriers to the free flow of data and supporting the realisation of the European Single Market.

The EU classifies high-value data sets into six broad categories, where the priority is to share public data without restrictions – earth observation and environmental data – energy consumption data and satellite imagery (weather, land, water quality, air monitoring, energy use, emission levels) and meteorological data.[24]

CONCLUSION

Big data and the Internet of Things enable numerous sources of information to be analysed by intelligent software to help farmers see crop and livestock performance. These kinds of technology can help farmers re-adjust practices based on real-time data produced via satellite imagery from drones to sensors that measure moisture levels in the soil. By using software based on data sets, it can identify the most precise tasks to be carried out. With the food crisis the planet is on the brink of entering, these new technological inventions to increase yields could be life-saving. The Internet of Things is used to improve the quality of data gathering. In the future, precision agriculture based on data will be more revolutionary than it is now. To improve decision-making efficiency it is important to collect data, create databases and share it with a wide range of farmers. In the future, farmers will not sit in machines; data and technology will be utilised to plant, irrigate or harvest. Data asset management in agriculture is not only useful for precision agriculture and to maximise yields, but it is essential to monitor the climate and take actions against climate change. Precision agriculture is an approach to farming that employs data sensors, connected devices, remote control tools and other advanced technologies to give farmers more control over the field and the team. Data management is able to adapt to and predict environmental changes as well as reduce risks when creating distribution strategies.

Notes

1 Sung, J. (2018) The Fourth Industrial Revolution and Precision Agriculture, In: Hussmann, S. (ed.) Automation in Agriculture – Securing Food Supplies for Future Generations (Rijeka: Intech), https://books.google.hu/books?hl=en&lr=&id=3WaQDwAAQBAJ&oi=fnd&pg=PA3&dq=data+asset+management+in+precision+agriculture&ots=PqFn_utNPV&sig=RPviOBZrCIWChRLBgnXzP0-H5y8&redir_esc=y#v=onepage&q&f=false

2 https://www.agroinform.hu/gazdasag/fontos-lenne-hogy-minel-tobb-feladatot-dronok-vegezzenek-el-a-mezogazdasagban-50280-001

3 Orbán, A. (2020) Közigazgatási adatvagyon, adatgazdálkodás és nyílt adatok, In: Sasvári, P. (ed.) Informatikai rendszerek a közszolgálatban I. (Budapest: Dialóg Campus), 31-51., https://nkerepo.uni-nke.hu/xmlui/bitstream/handle/123456789/15909/732_Informatikai_rendszerek_kozszolgalatban_02_orban.pdf?sequence=4

4 Sung, J. (2018) The Fourth Industrial Revolution and Precision Agriculture, In: Hussmann, S. (ed.) Automation in Agriculture – Securing Food Supplies for Future Generations (Rijeka: Intech), https://books.google.hu/books?hl=en&lr=&id=3WaQDwAAQBAJ&oi=fnd&pg=PA3&dq=data+asset+management+in+precision+agriculture&ots=PqFn_utNPV&sig=RPviOBZrCIWChRLBgnXzP0-H5y8&redir_esc=y#v=onepage&q&f=false

5 OECD (2016) Is precision agriculture the start of a new revolution?, In: Farm Management Practices to Foster Green Growth, https://read.oecd-ilibrary.org/agriculture-and-food/farm-management-practices-to-foster-green-growth/is-precision-agriculture-the-start-of-a-new-revolution_9789264238657-8-en#page1

6 Mesterséges Intelligencia Koalíció, Digitális Jólét Program, Innovációs és Technológiai Minisztérium (2020) *Magyarország Mesterséges Intelligencia Stratégiája*, https://ai-hungary.com/api/v1/companies/15/files/137203/view

7 Evert, F. K. van, Been, T. H., Booij, J. A., Kempenaar, C., Kessel, G. J. T., Molendijk, L. P. G. (2018) *Akkerweb: A Platform for Precision Farming Data, Science, and Practice* (Wageningen University & Research), https://www.wur.nl/nl/Publicatie-details.htm?publicationId=publication-way-353339353439

8 Montanarella, L., Panagos, P. (2020) The relevance of sustainable soil management within the European Green Deal (European Commission, Joint Research Centre), https://www.sciencedirect.com/science/article/pii/S0264837720304257/pdf?isDTMRedir=true&download=true

9 Digitális jólét program: DAS – Magyarország Digitális Agrár Stratégiája

10 OECD (2019) Digital innovations and the growing importance of agricultural data, In: Digital Opportunities for Better Agricultural Policies, https://www.oecd-ilibrary.org/sites/571a0812-en/1/2/2/1/index.html?itemId=/content/publication/571a0812-en&_csp_=08a7611e3b784928ead9720e9063fd32&itemIGO=oecd&itemContentType=book

11 Food and Agriculture Organization (2021) *Statistics about data collection and management*, http://www.fao.org/statistics/en/

12 Food and Agriculture Organization of the United Nations (2021) *Small family farmers produce a third of the world's food*, http://www.fao.org/news/story/en/item/1395127/icode/

13 Food and Agriculture Organization of the United Nations (2021) Farm data management, sharing and service for agriculture development, http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1382042/

14 OECD (2019) Digital innovations and the growing importance of agricultural data, In: Digital Opportunities for Better Agricultural Policies, https://www.oecd-ilibrary.org/sites/571a0812-en/1/2/2/1/index.html?itemId=/content/publication/571a0812-en&_csp_=08a7611e3b784928ead9720e9063fd32&itemIGO=oecd&itemContentType=book

15 Raguseo, E., Vitari, C. (2018) Investments in big data analytics and firm performance: an empirical investigation of direct and mediating effects, International Journal of Production Research, 56(15), 5206-5221., https://www.researchgate.net/publication/322795856_Investments_in_big_data_analytics_and_firm_performance_an_empirical_investigation_of_direct_and_mediating_effects

16 Wolfert, S., Ge, L., Verdouw, C., Bogaardt, M-J. (2017) Big Data in Smart Farming – A review, Agricultural Systems, Volume 153, 69-80., https://www.sciencedirect.com/science/article/pii/S0308521X16303754

17 Wysel, M., Baker, D., Billingsley, W. (2021) Data sharing platforms: How value is created from agricultural data, Agricultural Systems, Volume 193, Article 103241, https://reader.elsevier.com/reader/sd/pii/S0308521X21001943?token=ECE80CE24014E269ED296B6678C15F6EF0D66DA00028685181D8D372E8420C6BA4C36A95DE3E624A65645962FC481791&originRegion=eu-west-1&originCreation=20210930232010

18 Willighagen, E. L., Brändle, M. P. (2011) Resource description framework technologies in chemistry, Journal of Cheminformatics, 3(15), https://link.springer.com/article/10.1186/1758-2946-3-15

19 Dey, K., Sekhawat, U. (2021) Blockchain for sustainable e-agriculture: Literature review, architecture for data management, and implications, Journal of Cleaner Production, Volume 316, Article 128254, https://www.sciencedirect.com/science/article/abs/pii/S0959652621024707

20 Szántói, Z., Stróbl, P. (2019) Copernicus Sentinel-2 Calibration and Validation, European Journal of Remote Sensing, 52(1), 253-255., https://www.tandfonline.com/doi/full/10.1080/22797254.2019.1582840?scroll=top&needAccess=true

21 OECD (2021) Agricultural Policy Monitoring and Evaluation 2021: Addressing the Challenges Facing Food Systems, https://www.oecd-ilibrary.org/sites/2d810e01-en/1/3/1/index.html?itemId=/content/publication/2d810e01-en&_csp_=af0753aa6f1227099c73c6abb0fd552b&itemIGO=oecd&itemContentType=book

22 Food and Agriculture Organization of the United Nations (2021) Farm data management, sharing and service for agriculture development, http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1382042/

23 Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019L1024&from=EN

24 Orbán, A. (2020) Közigazgatási adatvagyon, adatgazdálkodás és nyílt adatok, In: Sasvári, P. (ed.) Informatikai rendszerek a közszolgálatban I. (Budapest: Dialóg Campus), 31-51., https://nkerepo.uni-nke.hu/xmlui/bitstream/handle/123456789/15909/732_Informatikai_rendszerek_kozszolgalatban_02_orban.pdf?sequence=4