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GO DIGITAL OR DIE? DIGITIZATION OF TAXES IN EU AND IN POLAND

ABSTRACT

To describe the transformation of law in the 21st century, three terms are commonly used: digitization, digitalization and electronization. The article does not definitively determine which of these terms is most appropriate; rather it posits that discussions of these concepts should consider both the extent of computer system implementation and the volume of processes conducted via the Internet (i.e. online). The third element is growing use of artificial intelligence. The objective of the article is to briefly illustrate how electronization was initiated and how it has evolved. The article outlines the legal foundations of the electronization of tax proceedings within the framework of European Union law, followed by an examination of Polish law. The European Union has issued a series of documents and undertaken many initiatives aimed at digital development, cybersecurity, artificial intelligence development and the creation of a single digital market. Of course, due to Poland's membership in the EU, Polish legislation should largely implement EU law. The main identified risks were highlighted in the article regarding the processes described. The methods applied include description and critical analysis of Polish and EU legal sources, drawing on selected literature. It should be emphasized that, due to space constraints and the complexity of the subject matter, the article does not claim to be comprehensive. Nevertheless, it undoubtedly provides arguments supporting the relevance of the maxim "go digital or die" in the current economic context of the e-economy.

Keywords: digitization, digitalisation, electronisation, tax law, artificial intelligence

1. INTRODUCTION

At the beginning, it should be noted that at first glance, the terms "digitization" and "digitalization" seem to be identical, and their interchangeable use appears acceptable. However, in the context of public law, which includes tax law, there is a tendency to use the term "digitization" to refer to the process of converting analog data (e.g. paper documents) into digital form. On the other hand,

"digitalization" refers to the broader application of digital technologies, including the automation and optimization of processes.¹ Some sources also suggest that the term "digitization" is widely used by economists, while the term "digitalization" is used less frequently.² When examining this issue in 2025, it seems that this distinction is somewhat artificial, and attempting to categorize each tool introduced by the legislator according to this division may pose difficulties and carry the risk of error. Additionally, it seems that the term "electronization"³ could also be an appropriate word. This article should be considered as an introduction to further research on this important contemporary issue, and the author does not make a definitive statement on which word is the most accurate. Furthermore, in the author's opinion, it seems reasonable to acknowledge that three terms are used to describe the transformation of law in the 21st century: digitization, digitalization and electronization. Continuing further, it should be noted that digital transformation is impacting not only many aspects of everyday life but also, at the macro level, the way the economy is organized and functions. This is also true when considering the implications of digital transformation on tax matters.⁴ Of course, this goes beyond the scope of this paper, but it is worth highlighting two issues which, in the author's opinion, together or separately, create a state referred to as the digitization, digitalization and electronization of Polish tax law. These components are computerization (informatization) and the use of the Internet, i.e.

¹ OECD, *Going digital in a multilateral world. Meeting of the Council at Ministerial Level*, C/MIN(2018)6, 30-31 May 2018, chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://one.oecd.org/document/C/MIN(2018)6/en/pdf, p. 11.

² Novak J. and others, *Polska jako Cyfrowy Challenger. Cyfryzacja nowym motorem wzrostu dla kraju i regionu*, Digital McKinsey 2018, chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://www.mckinsey.com/pl/~media/McKinsey/Locations/Europe%20and%20Middle%20East/Polska/Raporty/Polska%20jako%20cyfrowy%20challenger/Raport-McKinsey_Polska-jako-Cyfrowy-Challenger.pdf, p. 8. English version of the report: Novak J. and others, *The rise of Digital Challengers How digitization can become the next growth engine for Central and Eastern Europe Perspective on Poland*, Digital McKinsey 2018, chrome-extension://efaidnbmnnnibpcajpcgclefindmkaj/https://www.mckinsey.com/pl/~media/McKinsey/Locations/Europe%20and%20Middle%20East/Polska/Raporty/Polska%20jako%20cyfrowy%20challenger/Poland%20as%20a%20Digital%20Challenger%20-%20report%20in%20English.pdf.

³ Although the aforementioned dictionary does not contain such a term: <https://dictionary.cambridge.org/spellcheck/english-polish/?q=electronization>.

⁴ OECD, *Going digital...*, *op. cit.*, p. 25. See also: <https://dictionary.cambridge.org/us/dictionary/english/digitization> (to digitize means to put information into digital form [=into the form of a series of the numbers 0 and 1] so that it can be used by computers and other electronic equipment) and: <https://dictionary.cambridge.org/us/dictionary/english/digitalization> – to digitize means to change something such as a document to a digital form (=a form that can be stored and read by computers), but also it means to start to use digital technology such as computers and the internet to do something.

enabling tasks to be carried out on-line. Literature points to the date of 23 December 1948 as the beginning of the Polish computer science. On that day, several scientists met at the University of Warsaw, in the Institut of Physics at 69 Hoża Street, and decided to begin work on the development of an electronic calculating machine. Such machines had already been created earlier in the USA.⁵ The Internet, on the other hand, had its origins in military applications and was also born in the USA as a response to the military threat posed by Russia during the Cold War. The idea behind the Internet was to allow communication even in the event of a nuclear attack on central devices.⁶ The Internet quickly gained an ubiquitous presence in both the economy and culture of developed societies,⁷ including Poland. The Department of Physics, the successor of the previously mentioned Institute at 69 Hoża Street, is considered the birthplace of the Polish Internet. It was here, on 17 August 1991, that the first fully functional Internet connection in Poland was established, involving the sending of an email from the University of Warsaw to the University of Copenhagen. Two years later, the first Polish web server was launched at the Department of Physics.⁸

The third element that should be given careful attention is the use of artificial intelligence (AI). However, this topic will not be extensively addressed in this article. It is enough to mention that the year 1997 can be identified as a moment that demonstrated that the belief that humans will always dominate machines is or may be misguided. Specifically, in that year, the IBM Deep Blue artificial intelligence⁹ defeated the world chess champion, Garry Kasparov. It should be noted that the development of artificial intelligence provides opportunities for data analysis on a scale previously unattainable for humanity.¹⁰ It is currently predicted

⁵ Noga M., Nowak J. S., (eds.), *Polska informatyka: wizje i trudne początki*, Warszawa 2017, p. 7. See also: Czubkowska S., *Historia informatyzacji w Polsce: system PESEL największym osiągnięciem*, 3.02.2012, available on: <https://forsal.pl/artykuly/590823,historia-informatyzacji-w-polsce-system-pesel-najwiekszym-osiagnieciem.html>.

⁶ https://www.usg.edu/galileo/skills/unit07/internet07_02.phtml and <https://pl.wikipedia.org/wiki/ARPANET> (describes what ARPANET is: It was created as an initiative of the U.S. Department of Defense (Pentagon). In 1958, after the shock caused by the Soviet Union's launch of Sputnik into space, the government agency ARPA was established with the task of observing and supporting initiatives with defense significance emerging at universities). See also: Birth of the Internet, <https://www.pbs.org/transistor/background1/events/arpamet.html>.

⁷ Burczyński T., *Zalatywanie spraw administracyjnych przez Internet*, Kontrola Państwowa 2002, no 3, p. 80.

⁸ <https://www.uw.edu.pl/100-lat-fizyki-na-hozej/>.

⁹ https://pl.wikipedia.org/wiki/Deep_Blue.

¹⁰ Tax Booster™: AI dla doradców podatkowych, *Od „Blade Runnera” do Tax Boostera - jak AI stało się naszą rzeczywistością*, LinkedIn, 14.03.2025, <https://www.linkedin.com/pulse/od-blade-runnera-do-tax-boostera-jak-ai-sta%25C5%2582o-si%25C4%2599-nasz%25C4%2585->

that robots, such as those in stores, are no longer a *science fiction* scenario,¹¹ like in the *Star Wars* movie (where two friendly robots, R2-D2 and C-3PO, appear). As the author is from Kraków, it is worth mentioning - as preparation to fulfill this prediction - that a robot resembling a dog has been undergoing tests since 2024 at the AGH (University of Science and Technology in Kraków), and its purpose includes, among others, exploring hard-to-reach areas.¹² It is also possible to already purchase industrial robots.¹³

As for legal solutions, as T. Burczyński points out, in Poland, it was precisely within the framework of administrative and tax law (the Code of Administrative Procedure¹⁴ and the Tax Ordinance¹⁵) that regulations enabling the use of the Internet in the relationship between the government and citizens first appeared.¹⁶ This was certainly, at least partly, inspired by legislative actions in the EU. The legislator's recognition of technological trends and adaptation to the new reality is certainly a pragmatic approach and can contribute to enhancing the efficiency of the legal system and individual EU member states. Efficiency in a state, or more specifically in the creation and implementation of tax law, can and should manifest itself in the speed and flexible response to changes occurring in the world.¹⁷

In 2018 Poland was classified among the group of ten countries (which also includes Bulgaria, Croatia, the Czech Republic, Lithuania, Latvia, Romania, Slovakia, Slovenia, and Hungary) referred to as "Digital Challengers", meaning markets with significant potential for digital economy growth. For comparison, the group of digitally advanced countries, known as "Digital Leaders", includes Belgium, Denmark, Estonia, Finland, the Netherlands, Ireland, Luxembourg, Norway and Sweden.¹⁸ "When comparing Poland and Sweden, as a representative of the aforementioned Digital Leaders, it can be observed that the greatest gap in terms of digitization is found in public utility services, industry, government

rzeczywisto%25C5%259Bci%25C4%2585-
2h3ef/?trackingId=69iBTUn%2BTl65FBuEvPfCPA%3D%3D.

¹¹ Białkowski K., *Czas Nowych Liderów*, Gość Niedzielny 2024, no 37, p. 41.

¹² Motak D., <https://lifeinkrakow.pl/w-miescie/8454,nowy-robot-na-krakowskiej-agh-zachowuje-sie-jak-pies-wykorzystuje-sztuczna-inteligencje>, 17.08.2024. The author saw this robot dog once during a walk (author's walk).

13 <https://www.robotorium.pl/dystrybucja-robot%C3%B3w> or
<https://www.fanuc.eu/pl/pl/roboty/robot-strona-filtrowania>.

¹⁴ Ustawa z dnia 14 czerwca 1960 r. Kodeks postępowania administracyjnego (t. j. Dz. U. z 2024 r., poz. 572).

¹⁵ Ustawa z dnia 29 sierpnia 1997 r. Ordynacja podatkowa (t. j. Dz. U. z 2025 r., poz. 111 ze zm.).

¹⁶ Burczyński T., *Załatwianie...*, op. cit., p. 80.

¹⁷ Sokołowska J., *Sprawność i etyka w sektorze finansów publicznych* (in:) Nowak-Far A. (red.), *Finanse publiczne i prawo finansowe*, Warszawa 2011, pp. 461-465.

¹⁸ Novak J. and others, *Polska jako Cyfrowy...*, *op. cit.*, p. 3.

administration, specialized services and business services".¹⁹ Data from 2021 shows that Poland has the largest digital economy in the region, valued at 44 billion euros, and has seen significant acceleration in digital growth in the years 2020-2021.²⁰ As indicated in the literature, the 21st century is the age in which digitization is becoming ubiquitous and many entities, including public administration and taxpayers, recognize the accuracy of the maxim *go digital or die*.²¹ Therefore, it is essential to conduct research on how modern governments are adapting to these observed changes. How to leverage new digital opportunities to rethink how the public sector functions, including the governance and the regulatory environment concerning these new (potentially disruptive) areas, and how to interact with the public is the main issue nowadays.²²

The next two chapters will outline selected legal foundations of the electronization of tax proceedings in the context of EU law, followed by Polish law. It should be pointed out that, especially in EU law, official documents can be divided into two categories: policy documents and legal documents. The main identified risks regarding the described processes will be highlighted in the conclusions.

2. EU LAW BASE FOR DIGITIZATION OF MEMBERS STATES TAX LAW

2.1. Policy documents

It seems that in the initial stage, the documents in the EU (which was established on 1 November 1993 by the Maastricht Treaty), that should be considered when searching for the framework for the electronization of tax matters in the EU, are documents of a programmatic and political nature. These will be presented below.

¹⁹ *Ibidem*, p. 11.

²⁰ McKinsey Company, *Polska jako Cyfrowy Challenger. Podsumowanie wyników raportu dla Polski*, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.mckinsey.com/pl/~/_media/mckinsey/locations/europe%20and%20middle%20east/polska/raporty/digital%20challengers%203/polska%20jako%20cyfrowy%20challenger_digital%20challengers.pdf, September 2022, p. 11.

²¹ Poniatowska-Jaksch M., Sobiecki R., Wprowadzenie (w:) Poniatowska-Jaksch M., Sobiecki R. (red.), *Cyfryzacja a przedsiębiorstwo*, Warszawa 2019, pp. 7 and 10. See also, as an example, the latest proposals from the European Commission regarding the creation of a unified digital notification portal, which companies in the EU could use when sending posted workers: Topolska A., *Będzie unijny portal do delegowania*, <https://www.gazetaprawna.pl/praca/artykuly/9756978,e-deklaracja-bedzie-unijny-portal-do-delegowania-pracownikow.html>, 13.03.2025.

²² OECD, *Going digital...*, *op. cit.*, p. 41.

The first horizontal program for building a modern electronic economy was the *eEurope initiative*,²³ announced by the European Commission in December 1999. Its goal was to create a society utilizing the opportunities of the new economy, particularly in the sectors of education, transportation, healthcare and employment activation,²⁴ with the objective to bring Europe on-line.²⁵

Substantively, this coincided with the European Council meeting on 23-24 March 2000, in Lisbon, where a new political and economic strategy for the EU was initiated, known as the *Lisbon Strategy*. The goal of this strategy was to make the European Union the most dynamic, competitive and knowledge-based economy in the world.²⁶

To achieve the objectives outlined above, the next document presented the so-called action plan, which included goals such as: „a cheaper, faster and secure Internet”, „stimulate the use of the Internet” and „government on line: electronic access to public services”.²⁷ The implementation of these goals was to include, among others, ensuring that by 2002, „essential public data online including legal, administrative, cultural, environmental and traffic information” would be available, as well as „simplified online administrative procedures for business e.g. fast track procedures to set up a company”.²⁸

The next program was the Action Plan of 2002 titled *eEurope 2005 – An Information Society for All*²⁹ It set the following objectives: „to modernise public services, and to give everyone the opportunity to participate in the global information society. eEurope 2005 therefore aims to stimulate secure services, applications and content based on a widely available broadband infrastructure”.³⁰

²³ European Commission, *eEurope 2002. An Information Society For All. Draft Action Plan prepared by the European Commission for the European Council in Feira 19-20 June 2000*, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2000:0330:FIN:EN:PDF, Brussels, 24.5.2000, COM (2000) 330 final, p. 2.

²⁴ Posłajko R., *Rozwój europejskiej polityki cyfrowej*, Poliarchia 2014, nr 2, <https://www.uj.edu.pl/documents/123362602/8eb25809-3f8e-414f-b33b-fca2e46cc079>, p. 41.

²⁵ European Commission, *eEurope 2002*..., *op. cit.*, p. 2.

²⁶ Posłajko R., *Rozwój*..., *op. cit.*, p. 42.

²⁷ European Commission, *eEurope 2002*..., *op. cit.*, p. 3.

²⁸ *Ibidem*, pp. 22-23.

²⁹ Commission of the European Communities, *Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions, eEurope 2005: An information society for all An Action Plan to be presented in view of the Sevilla European Council*, 21/22.06.2002, Brussels, 28.5.2002 COM(2002) 263 final and R. Posłajko, *Rozwój*..., *op. cit.*, p. 43.

³⁰ *Ibidem* (Commission), p. 2.

It is stated in this document that by 2005, Europe should have i.a.: modern online public services, e-government, as well as a dynamic e-business environment.³¹ Interactive public services should be accomplished by end 2004 through the following steps: „Member States should have ensured that basic public services are interactive, where relevant, accessible for all, and exploit both the potential of broadband networks and of multi-platform access. This will require back-office reorganisation which will be addressed in the good practice exercise. It also implies addressing access for people with special needs, such as persons with disabilities or the elderly”.³²

In March 2005, at the European Council summit, a document known as the *Renewed Lisbon Strategy* was adopted. This new strategy led to the approval in June 2005 of the *i2010 initiative – European Information Society for Growth and Employment*.³³ The Community recognized knowledge and innovation as the drivers of sustainable growth and emphasized that "it is necessary to build a fully inclusive information society based on information and communication technologies (ICT) widely applied in public services, small and medium-sized enterprises, and households".³⁴ Regarding public services, it was emphasized that they are a crucial element of the European economy. It was identified that the contemporary challenge is to make these services "better, more accessible and less costly". At the same time, an example of success in implementing ICT-based public services was highlighted in the form of online tax declarations, which save millions of hours annually.³⁵

The next step was the adoption of the eGovernment Action Plan in 2006 – *i2010 eGovernment Action Plan*.³⁶ As stated, this document is „designed to make public services more efficient and more modern and to target the needs of the general population more precisely. To do this, it proposes a series of priorities and a roadmap to accelerate the deployment of eGovernment in Europe”. This document, aside from issues related to the electronization of public procurement,

³¹ *Ibidem*, p. 3.

³² *Ibidem*, p. 11.

³³ Pośtajko R., *Rozwój...*, op. cit., pp. 45 i 47.

³⁴ Commission of the European Communities, *Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions "i2010 – A European Information Society for Growth and Employment" [„i2010 – Europejskie społeczeństwo informacyjne na rzecz wzrostu i zatrudnienia”]*, Brussels, 1.6.2005 COM(2005) 229 final, chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2005:0229:FIN:PL:PDF, p. 2.

³⁵ *Ibidem*, p. 11.

³⁶ Communication from the Commission, *i2010 eGovernment Action Plan - Accelerating eGovernment in Europe for the Benefit of All [COM(2006) 173 final, 25.04.2006, https://eur-lex.europa.eu/EN/legal-content/summary/i2010-egovernment-action-plan.html*.

is characterized by a great deal of generality. However, it introduces an interesting definition: „eGovernment seeks to use information and communication technologies to improve the quality and accessibility of public services. It can reduce costs for businesses and administrations alike, and facilitate transactions between administrations and citizens. It also helps to make the public sector more open and transparent and governments more accountable and understandable to citizens”.³⁷

In response to the economic crisis in 2008, the EU adopted *the Europe 2020 strategy* and commissioned the report *A New Strategy for the Single Market*,³⁸ where the creation of a Digital Single Market in the EU was highlighted as an important element.³⁹

All of the above-mentioned documents led to the adoption of *the Digital Agenda for Europe* in 2010.⁴⁰ As stated, "the overall goal of the Digital Agenda is to achieve sustainable economic and social benefits from a Digital Single Market based on fast and very fast internet and interoperable applications".⁴¹ It also highlighted issues that are obvious in 2025, such as: "an increasing number of everyday tasks are being carried out online, ranging from applying for jobs to paying taxes".⁴²

In 2015 *the Digital Single Market Strategy for Europe* was issued.⁴³ It stated that the objective is, among other things, to create the appropriate conditions for the development of digital networks and services, as well as to maximize economic

³⁷ *Ibidem*.

³⁸ Monti M., *Nowa strategia na rzecz jednolitego rynku. W służbie gospodarki i społeczeństwa Europy. Sprawozdanie dla przewodniczącego Komisji Europejskiej J.M. Barroso*, 9.05.2010, r., <https://ec.europa.eu/docsroom/documents/15501/attachments/1/translations/pl/renditions/native>, p. 8.

³⁹ Posłajko R., *Rozwój...*, *op. cit.*, p. 48-49.

⁴⁰ European Commission, *Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions Digital Agenda for Europe [Europejska agenda cyfrowa]*, KOM(2010)245 final version, 19.05.2010, Brussels, chrome-extension://efaidnbmnnnibpcajpgclcfefndmkaj/<https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0245:FIN:pl:PDF>.

⁴¹ *Ibidem*, p. 3.

⁴² *Ibidem*, p. 28.

⁴³ Commission of the European Communities, *Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions. A Digital Single Market Strategy for Europe [Strategia jednolitego rynku cyfrowego dla Europy]*, Brussels, 6.5.2015 COM(2015) 192 final. See also <https://cyberpolicy.nask.pl/strategia-jednolitego-rynku-cyfrowego-dla-europy-strategia-dsm/>.

growth generated by the European digital economy. Achieving these goals requires "ultra-fast, secure, and reliable infrastructure and services related to content, as well as appropriate legal conditions for innovation, investment, fair competition, and equal playing fields" as well as "investments in ICT infrastructure and technologies such as cloud computing and big data, as well as research and innovation that will enhance industrial competitiveness, improve public services, expand the number of people using the digital economy and improve their skills."⁴⁴ The document also indicated that "more can be done to modernize public administration, achieve cross-border interoperability, and facilitate interactions with citizens". It emphasized that electronic public services increase cost-effectiveness and improve service quality for citizens and businesses. It was stated that, for this purpose, the European Commission will launch a pilot project applying the "once only" principle in administration-petitioner relations and will analyze the possibility of introducing a secure EU-wide electronic solution (a secure online document repository). This is intended to ensure that services do not ask petitioners for information that is already in their possession.⁴⁵

In 2016 the European Commission issued a *Communication on e-Government*.⁴⁶ This document referred to the 2014 OECD Recommendation on Digital Government Strategy.⁴⁷ The Communication recommends that "by 2020, public administrations and public institutions in the European Union should be open, effective, and universal, providing all citizens and businesses across the EU with borderless, personalized, user-friendly, end-to-end digital public services. In order to design and provide better services that meet the needs and expectations of citizens and businesses, innovative solutions will be applied. Public administrations will take advantage of the opportunities offered by the new digital environment to facilitate interactions with interested parties and between each other."⁴⁸ Author can fully agree with the following assessment presented in the discussed communication: "[e]lectronic government supports administrative processes, improves service quality, and increases internal efficiency within the public sector. Digital public services reduce the administrative burden on businesses and citizens, as contact with public administrations becomes faster, more efficient, more convenient, more transparent, and cheaper. Furthermore,

⁴⁴ *Ibidem*, p. 4.

⁴⁵ *Ibidem*, p. 18.

⁴⁶ Commission of the European Communities, *Communication from the Commission to the European Parliament, the Council, the Economic and Social Committee and the Committee of the Regions. EU eGovernment Action Plan 2016–2020: Accelerating the Digital Transformation of Government [Plan działania UE na rzecz administracji elektronicznej na lata 2016–2020. Przyspieszenie transformacji cyfrowej w administracji]*, Brussels, 19.4.2016 COM(2016) 179 final.

⁴⁷ *Ibidem*, p. 2.

⁴⁸ *Ibidem*, p. 3.

integrating digital technologies into the administration modernization strategy can bring additional economic and social benefits to society as a whole. Digital transformation in administration is one of the key conditions for successfully building a Single Market".⁴⁹

In July 2024 the second annual report on the State of the Digital Decade takes stock of the EU's progress towards a successful digital transformation, as set out in the Digital Decade Policy Programme 2030. The 2024 State of the Digital Decade evaluates the progress - at both the EU and national levels - towards realising the objectives and targets set by the Digital Decade Policy Programme (DDPP). It explores the key drivers and challenges to achieve the EU's digital transformation, including a new geopolitical paradigm, fostering competitiveness in a complex economic context, entering a new age shaped by generative AI, and keeping people and societies engaged in an increasingly hybrid context. The report also highlights the EU's establishment as a global policy innovator and discusses the strengthening of the EU's digital industrial basis.⁵⁰

2.2. Legal documents

It appears that the first act to which attention should be drawn is Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market⁵¹. This directive established general provisions facilitating the exercise of the freedom of establishment by service providers and the free movement of services;⁵² however, it did not directly address taxation.⁵³ According to the directive, "Member States shall ensure that all procedures and formalities related to the establishment and operation of service activities are easy to complete remotely and electronically, via an appropriate single contact point and competent authorities".⁵⁴ This provision therefore imposes on EU Member States not only the requirement for the electronic processing of procedures but also their standardization. As correctly noted in the literature, "the exchange of information between different IT systems is possible only after agreeing on the

⁴⁹ *Ibidem*, p. 2.

⁵⁰ Information fully copied from the provided page: *Report on the state of the Digital Decade 2024*, 2.07.2024, <https://digital-strategy.ec.europa.eu/pl/library/report-state-digital-decade-2024> and "24-Annex 3 Poland Executive Summary".

⁵¹ OJ L 376, 27.12.2006, p. 36–68.

⁵² Art. 1 paragraph 1 of the mentioned directive.

⁵³ Art. 2 paragraph 3 of the mentioned directive.

⁵⁴ Art. 8 paragraph 1 of the mentioned directive.

appropriate standards, both in terms of formats and the content of document templates".⁵⁵

It should be noted next Council Directive 2011/16/EU of 15 February 2011 on administrative cooperation in the field of taxation and repealing Directive 77/799/EEC.⁵⁶ It states that "[i]n times of globalization, the need for mutual assistance between Member States in the field of taxation is becoming increasingly important. Due to the significant increase in taxpayer mobility, the number of cross-border transactions, and the internationalization of financial instruments, it is difficult for Member States to correctly determine the amount of taxes owed. These growing difficulties affect the functioning of tax systems and lead to double taxation, which in turn encourages tax fraud and evasion, while control powers remain at the national level. This jeopardizes the functioning of the internal market".⁵⁷ According to Article 21, the exchange of information should, where possible, take place electronically using the common CCN network. The exchange of information may concern matters specified in Article 2 of this directive.

Another act worth mentioning was Directive 2014/55/EU of the European Parliament and the Council of 16 April 2014 on electronic invoicing in public procurement.⁵⁸ Its aim was to remove barriers to cross-border trade arising from the coexistence of various legal requirements and technical standards for electronic invoicing.⁵⁹ One of the proposed requirements in this document is that the European standard for e-invoicing should be technologically neutral (to avoid potential disruptions to competition) and compatible with international standards (to avoid obstacles when issuing invoices to buyers in third countries).⁶⁰ The scope of the information included in e-invoices is specified in Articles 6 and 9 of the aforementioned directive.

The European Parliament and Council Regulation (EU) No 910/2014 of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC⁶¹ was adopted. Compliance with this regulation in tax matters appears to be required due to its Recital 12 of the Preamble, which states: "The aim of this Regulation is not to

⁵⁵ The requirement for standardization is rightly pointed out by Kraska M., Matuszewska-Maróń M., *Nowy wymiar standaryzacji dokumentów w e-administracji*, Przegląd Prawa Publicznego 2013, no 4, pp. 67-75, from which the citation originates (I used the online version, hence I indicate that the citation comes from point 2).

⁵⁶ OJ L 64, 11.3.2011, p. 1–12.

⁵⁷ *Ibidem*, pkt 1 of the Preamble.

⁵⁸ OJ L 133, 6.5.2014, p. 1–11.

⁵⁹ *Ibidem*, pkt 5 of the Preamble.

⁶⁰ *Ibidem*, pkt 20 of the Preamble.

⁶¹ CELEX number:32014R0910, known as "eIDAS".

interfere with the electronic identity management systems and the related infrastructures established in the Member States. Its objective is to ensure secure electronic identification and authentication for the purpose of accessing cross-border online services offered by the Member States".

Since 2019, a number of VAT provisions concerning distance selling have been introduced. First, Directive 112 on VAT was amended by adding Articles 369 and subsequent articles,⁶² which introduced the so-called VAT MOSS (Mini One Stop Shop), a facilitation for entrepreneurs in the form of a single VAT registration requirement within the EU for the sale of electronic, broadcasting, and telecommunications services to private individuals from other EU countries. Subsequently, VAT MOSS was replaced on 1 July 2021 by the so-called OSS procedure (One Stop Shop) – the facilitation was extended to cover distance sales of goods. As a result, entrepreneurs no longer need to register for VAT in each individual country where their buyers are located, even after exceeding the threshold for distance sales of goods.⁶³ Importantly, according to Article 369c of Directive 112 VAT, the taxpayer must notify the relevant authorities of both the start and the end of using the aforementioned procedure electronically.

In the context of digitalization, it is also important to mention that on 11 March 2025, the Council of the European Union approved the VAT in Digital Age (ViDA) package, which means, among other things, that by 1 January 2035, Member States with national mandatory real-time digital transaction reporting should align their systems with EU standards.⁶⁴

In conclusion, it should be also noted that on 13 March 2024 the European Parliament adopted the world's first regulation on artificial intelligence.⁶⁵

⁶² The change came into effect on 22 December 2019 under Council Directive (EU) 2019/1995 of 21 November 2019 amending Directive 2006/112/EC with regard to provisions on distance selling of goods and certain domestic supplies of goods (OJ L 310, 2.12.2019, p. 1–5), art. 1.

⁶³ <https://www.pit.pl/aktualnosci-sponsorowane/one-stop-shop-oss-w-praktyce-1006203>.

⁶⁴ <https://crido.pl/blog-taxes/pakiet-vida-oficjalnie-przyjety-przez-rade-ue-reforma-vat-staje-sie-faktem/>.

⁶⁵ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act) (Text with EEA relevance), PE/24/2024/REV/1, OJ L, 2024/1689, 12.7.2024, ELI: <http://data.europa.eu/eli/reg/2024/1689/oj>.

3. DIGITIZATION IN POLISH TAX LAW SYSTEM

Digitization of tax processes in Poland began at the beginning of the 21-st century, when the possibility of submitting tax declarations in electronic form was introduced. This took place on 1 January 2004.⁶⁶ At that time, article 3a of the Tax Ordinance was introduced, stipulating that, unless otherwise required by separate laws, declarations could be submitted electronically. It was specified that declarations submitted electronically should include data specified in the form (template) and must be signed with a secure electronic signature. It should therefore be noted that the digitization of the Polish tax system began 21 years ago, shortly before Poland's accession to the EU. The first element was the introduction of electronic declarations.

After approximately two and a half years, the possibility of electronic communication with the tax administration and electronic delivery was introduced. On 16 August 2006, a provision entered into force,⁶⁷ stating that the delivery of documents, except for certificates, may take place *via* electronic communication means, as defined by the regulations on the provision of electronic services, to the email address of the party, its representative, or attorney, provided that a request has been made to the tax authority for the electronic delivery of documents. In matters concerning the preparation of document structures in electronic form and the organizational and technical conditions, the provisions of the Administrative Procedure Code and the executive regulations issued thereunder shall apply accordingly.

Subsequently, on 17 June 2010, the Polish tax legislator introduced the definition of an electronic document, which was done through the adoption of article 3, point 13 of the Tax Ordinance.⁶⁸ According to this definition, an electronic document is a collection of data, organized in a specific internal structure, that forms a separate

⁶⁶ Pursuant to the art. 1 ustawy z dnia 12.09.2002 r. o zmianie ustawy – Ordynacja podatkowa oraz o zmianie niektórych innych ustaw (Dz. U. nr 169, poz. 1387). In this context – for the sake of order – it is worth pointing out that another date (earlier – 2002) is indicated by M. Niezgódka-Medek in commentary to art. 3a o.p. (in:) Babiarz S., Dauter B., Hauser R., Kabat A., Niezgódka-Medek M., Rudowski J., *Ordynacja podatkowa. Komentarz*, Warszawa 2019, p. 82. However, the author does not indicate the legal basis and therefore her assertion does not seem justified.

⁶⁷ Ustawa z dnia 30 czerwca 2005 r. o zmianie ustawy - Ordynacja podatkowa oraz o zmianie niektórych innych ustaw (Dz.U. nr 143, poz.1199), art. 1.

⁶⁸ Niezgódka-Medek M., komentarz do art. 3 o.p. (in:) Babiarz S., Dauter B., Hauser R., Kabat A., Niezgódka-Medek M., Rudowski J., *Ordynacja podatkowa. Komentarz*, Warszawa 2019, p. 79, Bogucka-Felczak M., Dzwonkowski H., Kondratowska J., komentarz do art. 3 o.p. (w:) Dzwonkowski H. (red.), *Ordynacja podatkowa. Komentarz*, Warszawa 2016, p. 43.

meaningful whole and is recorded on an electronic data carrier. An electronic data carrier is understood as a material or device used for recording, storing, and reading data in digital form.⁶⁹ Such a carrier may include, for example, computer memory, storage drives (hard drives [HDD] and solid-state drives [SSD]), USB memory devices (flash drives), CD-ROM and DVD discs, cards with printed barcodes, floppy disks or external drives.⁷⁰

On a side note - it is noted in the literature that the aforementioned definition of an electronic document is not fully consistent with the EU model, as it does not specify the type of carrier on which the document should be transferred.⁷¹ The EU model is contained in article 3, point 35 of the eIDAS regulation,⁷² which defines an electronic document as 'any content stored in electronic form, particularly text, or an audio, visual or audiovisual recording. In light of the above, it seems that, for example, a link to a recording on a YouTube portal should also be considered an electronic document. It is also worth noting that the regulation stipulates that the legal effect of an electronic document and its admissibility as evidence in court proceedings are not questioned solely because the document is in electronic form.⁷³ As emphasized, "electronic documents are crucial for the further development of cross-border electronic transactions in the internal market. This regulation should establish the principle that the legal effect of an electronic document should not be questioned solely because the document is in electronic form, so as to ensure that an electronic transaction is not rejected solely because the document is in electronic form".⁷⁴

On 11 May 2014 the Polish legislator introduced the definition of the tax portal through the adoption of article 3, point 14 of the Tax Ordinance.⁷⁵ The introduction of this tool took place through an amendment to the Act on the Computerization

⁶⁹ Art. 3 pkt 1 i 2 ustawy z dnia 17 lutego 2005 r. o informatyzacji działalności podmiotów realizujących zadania publiczne (t. j. Dz. U. z 2024 r., poz. 1557 ze zm.).

⁷⁰ <https://epdokumenty.pl/rodzaje-nosnikow-danych-przechowywanie-informacji-dawniej-i-dzis/> and <https://www.archiwizacjadokumentow.com.pl/glossary/nosnik-informatyczny/>.

⁷¹ Zob. Popławski M., komentarz do art. 3 [w:] Etel L. (red.), *Ordynacja podatkowa. Tom I. Zobowiązania podatkowe. Art. 1-119zzk. Komentarz aktualizowany*, LEX/el. 2024 along with the literature provided there.

⁷² The regulation described in section 2.2 of this article.

⁷³ Art. 46 of the regulation described.

⁷⁴ Pkt (63) of the Preamble of the regulation described.

⁷⁵ On a side note, it should be noted that as of 1 September 2022, the discussed article 3, point 14 of the Tax Ordinance was repealed. As indicated (in the justification for the draft act eliminating the aforementioned provision), this was due to the comprehensive regulation of this matter in Article 35a of the Act of 16 November 2016 on the National Tax Administration (Popławski M., komentarz..., *op. cit.*)

of Entities Performing Public Tasks.⁷⁶ The tax portal was defined as the information and communication technology system of the tax administration used for communication between tax authorities and taxpayers, payers, and collectors, as well as their legal successors and third parties, particularly for submitting applications, filing declarations, and delivering documents from tax authorities via electronic communication means. The current internet address of this portal is www.podatki.gov.pl.⁷⁷ The introduction of the aforementioned portal was a result of implementing Directive 2006/123/EC of the European Parliament and Council of 12 December 2006 on services in the internal market.⁷⁸

On 11 May 2014,⁷⁹ a series of changes were introduced that impacted the digitalisation of Polish tax law. These included, among others:

- a) the acceptance of electronic power of attorney,
- b) the possibility for the tax authority to request the taxpayer, payer, or collector to consent to receiving documents in electronic form for all tax matters handled by that authority,
- c) the provision that tax matters are to be handled either in writing or in the form of an electronic document, unless specific regulations provide otherwise,
- d) the option for an individual interpretation to be issued in the form of an electronic document.

It should be noted that there are currently many mandatory electronic solutions in operation in Poland concerning taxation.⁸⁰

⁷⁶ Ustawa z dnia 10 stycznia 2014 r. o zmianie ustawy o informatyzacji działalności podmiotów realizujących zadania publiczne oraz niektórych innych ustaw (Dz. U. poz. 183 ze zm.).

⁷⁷ <https://www.gov.pl/web/gov/portal-podatkowy>. It should also be noted that as of 20 February 2019, the website of the Ministry of Finance's Public Information Bulletin [Biuletyn Informacji Publicznej] is available at the website www.gov.pl/finanse. The archived Public Information Bulletin of the Ministry of Finance is available at the following address: <https://mf-arch2.mf.gov.pl/web/bip/ministerstwo-finansow>.

⁷⁸ The regulation described in section 2.2 of this article. Niezgódka-Medek M., komentarz do art. 3 o.p. (in:) Babiarz S., Dauter B., Hauser R., Kabat A., Niezgódka-Medek M., Rudowski J., *Ordynacja podatkowa. Komentarz*, Warszawa 2019, p. 79.

⁷⁹ Above mentioned ustawa z dnia 10 stycznia 2014 r. o zmianie ustawy o informatyzacji (...). See as well: Martysz Cz., Komentarz do ustawy z dnia 10 stycznia 2014 r. o zmianie ustawy o informatyzacji działalności podmiotów realizujących zadania publiczne oraz niektórych innych ustaw, [in:] *Ustawa o informatyzacji działalności podmiotów realizujących zadania publiczne. Komentarz*, wyd. II, LEX 2015 and Byrski J., *Nowelizacja ustawy o informatyzacji działalności podmiotów realizujących zadania publiczne z dnia 12 lutego 2010 r.*, CASUS. Krajowa Reprezentacja Samorządowych Kolegiów Odwoławczych 2010, no 56, pp. 33-36.

⁸⁰ In more detail: Majka P., *Informatyzacja systemu podatkowego* (in:) Brzeziński B., Franczak A., Olesińska A., *Polskie prawo podatkowe*, Warszawa 2024 and Majka P., Gromadzenie i przepływ informacji na potrzeby systemu podatkowego (in:) Brzeziński B., Franczak A., Olesińska A., *Polskie prawo podatkowe*, Warszawa 2024.

The most significant of these is the so-called JPK (Standard Audit File for Tax [Jednolity Plik Kontrolny]), which has been in effect since 1 July 2016. In general, this obligation requires taxpayers maintaining tax books using computer programs to send accounting data in the JPK format to the tax authorities. The obligation was introduced through the addition of Article 193a of the Tax Ordinance, which states: "§1. In the case of maintaining tax books using computer programs, the tax authority may request the transmission of all or part of these books and accounting documents via electronic communication means or on electronic data carriers, in an electronic form corresponding to the logical structure referred to in §2, specifying the type of tax books and the period to which they relate. §2. The logical structure of the electronic form of tax books and accounting documents, taking into account the possibility of generating it from computer programs commonly used by entrepreneurs and the automatic data analysis, is available in the Public Information Bulletin on the website of the office servicing the minister responsible for public finance matters. §3. The minister responsible for public finance matters shall, by way of regulation, specify the method of transmitting tax books, parts of these books, and accounting documents in electronic form via electronic communication means, as well as the technical requirements for the electronic data carriers on which the books, parts of these books, and accounting documents may be stored and transmitted, taking into account the need to ensure the security, reliability, and undeniability of the data contained in the books and the need to protect them from unauthorized access".

In the JPK format, VAT declarations and VAT records are also transmitted (see: article 99(11c) and article 109(11i) of the VAT Act), which is why the term JPK VAT is commonly used. Since VAT declarations are filed for monthly or quarterly periods, there are two variants of the JPK_VAT files. These are the JPK_V7M variant (intended for taxpayers who settle VAT on a monthly basis, i.e., those who file VAT declarations for monthly periods) and the JPK_V7K variant (intended for taxpayers who settle VAT quarterly, i.e., those who file VAT declarations for quarterly periods).⁸¹

Starting from settlements for the year 2025, the JPK CIT has been introduced, which is the declaration for corporate income tax. This JPK consists of JPK_KR_PD (Standard Audit File for Accounting Books – Corporate Income Tax) and JPK_ST_KR (Standard Audit File for Fixed Assets). The first reporting

⁸¹ Gumola M., Krywan T., *Sankcje za nieprzestrzeganie obowiązku przekazywania organom podatkowym danych w formacie JPK*, ABC, Lex/el. (the legal status as of 30 December 2024).

period for which the report must be submitted will be the tax year beginning after 31 December 2024.⁸²

The implementation of the National e-Invoice System (KSeF) is planned for 2026. It will become mandatory in two phases: a) from 1 February 2026 for entities whose sales value in the previous tax year exceeded PLN 200 million; b) from 1 April 2026 for all entrepreneurs. This is a new method for storing invoices, issuing invoices, as well as the circulation of invoices both within and outside the entity. It is a state platform for issuing and receiving invoices electronically.⁸³

In October 2024, the Ministry of Digital Affairs presented the draft of the Poland Digitalisation Strategy for 2035.⁸⁴ At present, it is available in the form of slides and sentence equivalents, from which one can infer key objectives, such as the creation of an e-State by 2035, where paper documents will be used only in exceptional circumstances. Other goals include the implementation of the principle of providing data by citizens only once, automation of case handling and the use of AI tools to "create transparent law" with "100% of entities performing public tasks working with digital documents", "100% of cases handled by these entities being processed electronically" and "80% of offices utilizing AI".⁸⁵ It is therefore expected that these objectives will also be applied in the area of taxation, raising legitimate concerns about the protection of taxpayers' rights (e.g. the automation of processes and case handling, as well as lawmaking by AI). The Ministry informs that, in response to feedback received during public consultations, a new draft of the State Digitalisation Strategy is being developed, incorporating changes based on the suggestions submitted so far.⁸⁶ As a result, one can anticipate that any changes stemming from this strategy will significantly impact the further digitalisation of taxation in Poland.

4. CONCLUSION

The development of the digital market seems inevitable, which is why further research into its functioning, as well as the desire to understand the impact of

⁸² Malinowski D. M., *Cyfryzacja ksiąg rachunkowych, czyli JPK CIT dogoni nas w roku 2025*, Przegląd Podatkowy 2024, no 12, pp. 3-4.

⁸³ Brzostowska M., *Wpływ KSeF na wewnętrzne procesy w biurze rachunkowym i w przedsiębiorstwie*, LEX/el. 2023, <https://ksef.podatki.gov.pl/>.

⁸⁴ <https://www.gov.pl/web/cyfryzacja/strategia-cyfryzacji-panstwa---20-czerwca-br-na-pge-narodowym>.

⁸⁵ https://www.gov.pl/attachment/963099d7-93a7-43e9-a610-99e15c20a3ab,Strategia_Cyfryzacji_Polski_28_10_2024_prezentacja.pdf, pp. 6, 50, 66, 67 and 73.

⁸⁶ <https://www.gov.pl/web/cyfryzacja/strategia-cyfryzacji-panstwa---20-czerwca-br-na-pge-narodowym>.

technology on the economy and taxpayers' behavior, are essential and fully justified for the creation of sound laws and best practices in this complex field. It is necessary to conduct research and, in the context of inevitable digitization, establish certain standards of conduct and regularities – as both EU and Polish legislators are attempting to do. Certainly, e-government contributes to the improvement of services for petents, increases internal efficiency in the public sector, and reduces the administrative burden on businesses and individuals. Contact with public administration, including tax authorities, should be quick, efficient, convenient, transparent and affordable.⁸⁷ However, the transition from paper-based to electronic systems, including the use of AI, raises legitimate concerns, the most significant of which are the uncertainty of the tax law/ tax obligations and the potential disregard for taxpayers' rights.

Below are the main identified risks:

1. privacy and data protection issues – the risk that information (which is very fragile, such as personal wealth data) may be exposed to unauthorized access, theft or misuse
2. lack of access to technology – not all taxpayers may have or wish to have access to the necessary technology or skills required to use electronic systems, which may lead to the marginalization of certain groups, particularly the elderly or less affluent individuals.
3. automation and system errors – the risk that automated tax systems may incorrectly calculate tax amounts or misclassify events, potentially resulting in improper tax liabilities; additionally, errors may occur during the migration of data from paper-based systems to electronic ones.
4. cyberattack risks – electronic systems are inherently vulnerable to cyberattacks, which may threaten the integrity of tax data and the security of information (e.g. the risk of data loss, alteration or misuse).
5. lack of understanding regarding the complexity of a taxpayer's situation and improper interpretation of regulations. The transition to e-government may result in the loss of personal contact with tax administration personnel, which, in the case of problems or uncertainties in tax matters, may hinder the resolution of cases in a way that is tailored to the individual situation.
6. negative psychological effects – the lack of personal contact may have negative psychological effects on taxpayers.
7. reliance on deepfake technology – electronic systems may struggle to distinguish between real facts and electronically created content, such as artificial intelligence-generated deepfakes.

⁸⁷ European Commission, *Komunikat (...) Plan działania UE na rzecz administracji elektronicznej...*, *op. cit.*, p. 2.

8. excessive complexity of systems – the complexity of new electronic systems may make it difficult for taxpayers to understand and navigate new regulations and procedures, which could lead to unintended errors or difficulties in fulfilling obligations.
9. increased control and monitoring – digitization may result in more advanced tools for tracking and controlling taxpayers' actions, which may raise concerns about excessive State intrusion into citizens' privacy.
10. dependence on technology – in the event of system failures or inaccessibility, taxpayers may encounter difficulties in fulfilling their tax obligations or obtaining assistance.⁸⁸

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⁸⁸ Pogroszewska M., *Cyfryzacja i prawo międzynarodowe kluczowe dla zmian w podatkach*, 16 October 2024 r., prawo.pl via Lex/el. (and phrase: „New technologies are also changing the area of risks in taxation. Until now, this area has been characterised by incorrect interpretation of regulations; in the future, it will involve system failures, said Dr. Andrzej Pałys”).

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