Kitti Pollák Dr., PhD.
Associate Professor,
Ludovika University of Public Service
Budapest, Hungary

Digitalisation and the use of AI in administrative procedures

Abstract

Digitalization and AI are revolutionary instruments of the 21st century, their use in public administration is key element for the progress and for prosperity. But what are the challenges and opportunities of new technologies, AI in public administration more precisely in administrative procedures? What are the pros and cons of digitalization of administrative procedures, and the use of AI in these decision-making process? And who are the responsible decision-makers "behind" AI? To answer these questions, we will analyze and present the findings that are useful in offering some answers. Legal documents, legal cases are examined in combination with qualitative research methods as well as desk research will be used. By using qualitative methods and focusing on patterns in existing documents, reviewing relevant literature, and empirical case studies regarding the discussed dilemmas of the paper to answer the above-mentioned questions. The article presents an incentive for further study of the field and solving the problem of the complex relationship between AI and public administration. The paper will first concentrate on digitalization an on the further, possible use of AI in administrative procedures. In this framework, the research would also present the latest changes and challenges in this area. Secondly the paper focus on a sector-specific topic, on the possibilities of consumer protection and the enforcement of consumers' rights, keeping in mind the rules of the DSA regulation and their impact, as well as the implementation of the possibility of digital alternative dispute resolution platforms in administrative proceedings, which would also contribute to the greening of public administration. The examination of this issue is of prime importance not only in Hungary, but also at the European Union level. The result of the paper also will prove that the article is a non-conceptual work, consciously wish to analyze the substance of the issue and to promote its understanding. Finally in connection with the research methodology, it should be also noted that – where it is interpretable – recommendations of the author will be given.

Keywords: digitalization, AI, administrative procedure

1. Introduction

Digitalization and artificial intelligence (hereinafter referred as: AI) are groundbreaking tools of the 21st century, playing a crucial role in the advancement and prosperity of public administration. However, their utilization raises significant questions, such as the advantages and disadvantages of digitalizing administrative procedures and incorporating AI into decision-making processes. Additionally, there is a need to identify the responsible of the administrative decisions made using AI.

This paper aims to address these questions by presenting findings that offer valuable insights. Firstly, the paper focuses on the definitions of AI, digitalization, and administrative procedures, laying the foundation for a comprehensive understanding of the topic. Secondly, it examines the current regulations governing the use of AI and digitalization in administrative procedures in Hungary, while acknowledging the emergence of new legislation, such as the EU AI Act[1], in this area. Furthermore, the paper explores the benefits and drawbacks of integrating AI in administrative procedures and digitalized administrative processes. A case study on the application of these technologies in the Hungarian consumer protection sector is presented to illustrate their beneficial implications. Finally, the paper emphasizes the importance of liability of AI in/digitalized administrative procedures, shedding light on the ethical considerations surrounding their implementation.

2. Definitions and the Hungarian regulation of automated decision making and AI

First, I would like to briefly define the following notions: administrative procedures, the digitalization of administrative processes especially automated decision-making procedures, and AI.

Administrative procedures can be determined as the proceedings of the administrative authorities, which includes the issues of the administrative actions in accordance with the legislation in an individual case.[2] The general rules of the administrative procedures in Hungary

[1] See: EU AI Act: https://www.europarl.europa.eu/doceo/document/TA-9-2024-0138-FNL-COR01_EN.pdf
[2] PATYI A. et al.: Közigazgatási hatósági eljárásjog, Dialóg Campus Kiadó, Budapest-Pécs, 2009. 19-30

is codified from 1st January, 2018 in the Act CL. of 2016 in the new Code of Administrative Procedures (hereinafter referred as: Ákr.).[3]

Digitalization refers to the process of converting information into digital format, enabling it to be processed, stored, and transmitted electronically.[4] In the context of administrative procedures, digitalization involves the adoption of digital technologies to automate and streamline tasks; enables the integration of data across various administrative departments and systems. In Hungary, the legal background of electronic administration is codified in the Act CCXXII of 2015 on Electronic administration and trust services (hereinafter referred as: E-Administration Act). There are diffenent development levels of electronic administration: (1) provision of information, (2) one-way connection (3) interactivity (4) transact (5) personification.[5] In Hungary, the level of personifacation has been reached. In 2017, a new type of procedure appeared, the so-called automated decision making.[6] In this case, the applicant after the electronic identification can submit an application via an electronic form provided by the administrative authority; and based on the available and on the obtained data through automatic information transfer, without any human intervention the administrative authority make the decision and communicate it with the applicant. This procedures' time limit is 24 hours. Automated decision making can be used and used in procedures commenced upon application and also in ex officio procedures. However automated decision-making can be applied if the following conditions are fulfilled:

1. the conditions for automated decision-making procedure under the E-Administration Act are met, and there is no party with opposing interests. These conditions are: a) in procedures commenced upon application, the applicant submits the request electronically, b) making the decision does require any deliberation and c) the data necessary for deciding the case are available.

   or

[3] See: POLLÁK Kitti: Quo Vadis: Codification of Administrative Procedure Rules in Hungary and in France In: Juraj, Nemec 25th NISPAcee Annual Conference : Innovation Governance in the Public Sector Bratislava, Szlovákia : NISPAcee 2017, 1-8.
[4] KARAJZ Sándor: A digitalizáció és a társadalmi innovációk összefüggései. In: KOSZTOPULOSZ Andreász – KURUCZLEKI Éva (ed.): Társadalmi és gazdasági folyamatok elemzésének kérdései a XXI. században. Szegedi Tudományegyetem Gazdaságtudományi Kar, Szeged, 2020, 192.
[5] See: CSATLÓS Erzsébet: az ügyfél és a hatósági döntéshozatal a digitalizáció korában Pro Futuro 2023/1.
[6] See: Ákr. 40. §

2. As regards the application, 2a) an Act or government decree enables it; 2b) all data are available to the authority at the time of its submission; 2c) decision making does not require deliberation; and 2d) there is no party with opposing interests.

An example of automated decision-making can be seen in the process of issuing a driver's license. In cases where this document needs to be replaced due to a manufacturing defect or data correction, the process is initiated ex officio. In all other instances, the procedure is initiated upon request. When the process is initiated ex officio, it is delivered in an automated decision-making procedure.

The definition of AI poses a complex question, as there is no universally agreed-upon definition within the literature.[7] The term "artificial intelligence" was initially used by John McCarthy during the Dartmouth Conference in 1956 and described AI as the science and engineering of creating intelligent machines.[8]

The literature[9] makes a distinction between a weak AI, a strong AI, and a super AI. The weak and strong categories are parallel to the so-called narrow (strict) and general AI terms. The essence of weak AI is that the abilities of machines are partly similar to human abilities, especially in terms of logical-matematical-language intelligence, and are used in the execution of small problems or tasks. In contrast, strong AI already represents a higher level, since the program actually has human abilities, that is, it has its own cognitive abilities. It has self-consciousness, a significant degree of self-awareness and self-direction. Strong AI is able to solve various complex tasks from different fields, as well as learn to resolve new problems that were not yet known during its creation. Ultimately, super-AI can do more than the human brain. It should be noted, that most of the current literature deals with the application of weak (strict,

[7] ETSCHEID, Jan: Artificial Intelligence in Public Administration. 18th International Conference on Electronic Government (EGOV), Sep 2019, San Benedetto del Tronto, Italy. 248-261.; CZÉKMANN Zsolt – KOVÁCS László – RITÓ Evelin: Mesterséges intelligencia alkalmazásának lehetőségei az államigazgatásban. Infokommunikáció és Jog. 2020. E-különszám. Online: https://szakcikkadatbazis.hu/doc/5641090,

[8] See: RAJARAMAN, Vaidy: JohnMcCarthy — Father of artificial intelligence, Resonance, 2014. 19(3):198-207; TURING, A. M.: Computing Machinery and Intelligence. Mind, New Series, Vol. 59, No. 236, Oct 1950. 433–460.

[9] See: BOSTROM, Nick: Superintelligence: Paths, dangers, strategies. Oxford University Press, London, 2014., REVOLIDIS, Ioannis–DAHI, Alan: The Peculiar Case of the Mushroom Picking Robot: Extra-contractual Liability in Robotics. In: CORRALES, Marcelo–FENWICK, Mark–FORGÓ, Nikolaus (ed.): Robotics, AI and the Future of Law. Springer, Singapore, 2018, 59., KOVÁCS Zoltán - GURÁLy Roland: A mesterséges intelligencia és egyéb felforgató technológiák hatásait vizsgáló munkacsoport eredményei in: KOVÁCS Zoltán (ed.) A mesterséges intelligencia és egyéb felforgató technológiák hatásainak átfogó vizsgálata, Katonai Nemzetbiztonsági Szolgálat, Budapest, 2023. 12-13., Eszteri Dániel: A mesterséges intelligencia fejlesztésének és üzemeltetésének egyes felelősségi kérdései, Infokommunikáció és Jog, 2015. 12. évf. 2-3. sz. 47-57.

narrow) AI, which are decisively related to the following areas: development of chatbots, machine learning, robotics. [10]

AI can be grouped in several aspects, including its method of implementation, as well as its application. When we talk about AI devices, we basically mean machine learning and expert systems. Today, machine learning method is one of the most widely used AI subsystems.[11]

In Hungary, regarding the regulation of AI in view of administratiove procedures the E-Administration Act and the Governement Decree 451/2016. (XII.19.) on the detailed rules of E-Administratin shall be noted. E-Administration Act provides for the possibility of using technology based on AI, and the government decree mentions voice training, recording and communication assistant services supported by AI.[12] On 1 July 2024, the Act CIII of 2023 on the Digital State and Certain Rules for the Provision of Digital Services will enter into force, which will abolish the E-Administration Act from 1 September 2024 and will make digital services available in several stages through the National Digital Citizenship Programme by 1 June 2025. This Act refers to AI in contaxt of electronic administration services where AI-based technology can be used as a support service.

It should also be noted, that if AI is also identified as technology,[13] the administrative authority shall, in accordance with the principle of effectiveness laid down in Section 4 of Ákr., organise its activity in such a manner as to result in the least possible expense for all participants in the procedure and, without prejudice to the requirements of clarifying the facts of the case, for the procedure to be closed as expeditiously as possible with the application of advanced technologies.[14] However, regarding the implementation of AI, it is essential to consider the fundamental right to fair administration.[15]

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[10] CZÉKMANN Zsolt – KOVÁCS László – RITÓ Evelin i.m. CZÉKMANN Zsolt – KOVÁCS László – RITÓ Evelin: Mesterséges intelligencia az államigazgatásban. In: TÖRÖK Bernát – ZŐDI Zsolt (ed.): A mesterséges intelligencia szabályozási kihívásai. Ludovika Egyetemi Kiadó, Budapest, 2021.

[11] FEJES Erzsébet–FUTÓ Iván: Mesterséges intelligencia a közigazgatásban – az érdemi ügyintézés támogatása. Pénzügyi Szemle, 2021/1, 30.

[12] See: E-Administration Act Article 38. Paragraph (5)

[13] STEFÁN Ibolya: A mesterséges intelligencia fogalmának polgári jogi értelmezése, Pro Futoro – A jövő nemzetékek joga, 2020. 1. 30.

[14] VARGA Zs András: Az alkotmányosság követelménye és az eljárás alapelvei in: PATYI András- VARGA Zs András (ed.): A közigazgatási eljárásjog alapjai és alapelvei, Dialóg Campus Kiadó, Budapest, 2019. 204-204.

[15] HOHMANN, Balázs: A mesterséges intelligencia közigazgatási hatósági eljárásban való alkalmazhatósága a tisztességes eljáráshoz való jog tükrében in: TÖRÖK Bernát - ZŐDI Zsolt (ed.): A mesterséges intelligencia szabályozási kihívásai : Tanulmányok a mesterséges intelligencia és a jog határterületeiről, Ludovika Egyetemi Kiadó, Budapest, 2021. 403-422.

The advantages, but also the disadvantages of digitalizing administrative procedures and AI in administrative procedures are numbreous. [16] The digitalization of administrative procedures and the utilization AI offer a multitude of benefits. Firstly, it significantly enhances efficiency by reducing the reliance on manual paperwork and streamlining processes. This not only saves time but also minimizes the likelihood of errors. Secondly, digitalization improves accessibility by enabling individuals to access and submit documents online, eliminating the need for physical visits to government offices. Furthermore, it facilitates data analysis and automation, leading to data-driven decision-making. Additionally, it has the potential to enhance the quality of services through AI-driven chatbots and virtual assistants that can provide personalized information to citizens, thereby improving the overall quality and accessibility of public services. This creates the opportunity for rapid response and personalized services. Moreover, digitalization is highly efficient in resource allocation. The predictive analytical capabilities of AI can be leveraged to allocate resources (personal, financial, infrastructural) more effectively. This ensures that resources are utilized in the most efficient and effective manner possible.

Nonetheless, the drawbacks of digitizing administrative procedures can be significant. Concerns regarding the use of AI in administrative procedures and autimatized administrative processes are plentiful. Firstly, there is a learning curve associated with transitioning from traditional paper-based processes to digital systems, which may necessitate additional training and resources. Secondly, digitalization can increase vulnerability to cyber threats and data breaches, necessitating robust security measures. Additionally, not all individuals may have access to the necessary technology or digital literacy skills, potentially creating a digital divide. When it comes to the responsible use of AI, ethical issues inevitably arise, such as privacy, data security, fairness of algorithms, and discrimination. AI algorithms have the potential to perpetuate social prejudices if not properly designed and trained. The successful integration of AI technologies requires public administration professionals to enhance their digital skills. Digitizing administrative procedures and utilizing AI in administrative authorities can lead to job loss too. Lastly, there are several questions surrounding trust and acceptance of AI and digitalized decision-making processes.

[16] See: OMAR, Sabeeha Salih - NAYEF, Jassim Mohamed - QASIM, Nameer Hashim - KAWAD, Raad Tomaa - KALENYCHENKO, Ruslan: The role of digitalazitation in improving accountability and efficiency in public services, Investigación operacional, 2024-04, Vol.45 (2), p.203; PARYCEK, Peter - SCHMID, Verena - NOVAK, Anna-Sophie: Artificial Intelligence (AI) and Automation in Administrative Procedures: Potentials, Limitations, and Framework Conditions, Journal of the knowledge economy, 2023-06

3. One good exemple in consumer protection rules in Hungary

After discussing the basisc definitaitons, the rules and the advantages/disadvantages of digitalization and the use of AI in administrative procedures, I would like to highlight a case where we have seen successful implementation of digitalization: the digital alternative dispute resolution in relation to consumer rights.

In the summer of 2022, Hungary introduced a Consumer Protection Policy based on four key pillars: child protection, digital consumer protection, accessibility of consumer protection, and support for the development of consistent legal practices. The rise of e-commerce necessitated a focus on digital consumer protection, aligning with the European Union's legislation on online trade. The principle guiding digital consumer protection is that what is prohibited offline should also be prohibited online, ensuring priority protection for consumers in the digital space.[17]

Hungary has implemented a conciliation panel procedure,[18] offering a simple, fast, and free alternative dispute resolution mechanism for resolving legal disputes between consumers and businesses. The primary objective of this procedure is to facilitate agreements between the parties involved. In response to the challenges posed by the digital age and the lessons learned during the pandemic,[19] a significant amendment has been made to the conciliation panel procedure. The amendment establishes online hearings as the primary method of conducting proceedings, allowing consumers to participate from the comfort of their homes, desks, or even mobile devices. This shift to online hearings enhances efficiency for consumers, businesses, and conciliation panels, while also reducing administrative burdens. However, consumers who prefer or require in-person hearings still have the option to request them at any time.[20]

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[17] See: SALGÓ, László Péter - KUPECKI, Nóra: Új utakon a hazai fogyasztóvédelem: A cselekvő fogyasztóvédelem jogalkotói és szakmai irányító szemmel, Pro Publico Bono : Magyar közigazgatás 2023. 11: 4. 5-16.; DARÁZS Lénárd: Digitális fogyasztóvédelem európai perspektívában In: KESERŰ Barna Arnold - SZOBOSZLAI-KISS Katalin - NÉMETH Richárd (ed.): SALUS VOCALIS. Csegöldi indulás - Győri érkezés. Ünnepi tanulmányok Fazekas Judit tiszteletére, Universitas-Győr Nonprofit Kft. 2023. 81-92.

[18] HÁMORI Antal: Kérelmező és/vagy bejelentő - ügyfél, harmadik személy, egyéb érdekelt?: Újabb "csemege" a fogyasztóvédelmi hatóság legújabb gyakorlatából, békéltető testületi fűszerezéssel, avagy egy hibás teljesítés margójára,IUSTUM AEQUUM SALUTARE, 2022. 18 : 2. 27-77. ; TURCSÁN Tamara: A fogyasztói viták békés rendezése - jogszabályi környezet és fejlesztési lehetőségek, Gondolat, Budapest, 2022.

[19] HOHMANN Balázs: Egyezség, online? A magyarországi békéltető testületek elektronikus kapcsolattartási lehetőségei a koronavírus járvánnyal érintett időszakban In: CSITEI Béla – SZÉPVÖLGYI Enikő (ed.): Pro Scientia aranyérmesek XV. Konferenciája: 2020 : Széchenyi István Egyetem, Győr, október 8-10., Budapest, Pro Scientia Aranyérmesek Társasága 2021. 71-78.

[20] See: Act CLV of 1997 on consumer protection 18.§-37/A. §

4. The responsability of AI ?

There are many dilemmas about the responsibility of AI and of the digitalized administrative decision-making. The main problem with AI is its unpredictability. [21] Article XXIV. Paragraph (2) of the Fundamental Law of Hungary states that " *Everyone shall have the right to compensation for any damage unlawfully caused to him or her by the authorities in the performance of their duties, as provided for by an Act*." [22] Therefore, when damage is caused by administrative authorities, it is not acceptable to attribute it to the lack of expertise of the public servant or the deficiencies within the administrative body. Consequently, the use of AI in administrative procedures raises numerous questions regarding the doctrinal aspects of liability.[23]

In the context of AI and digitalized decision-making, a pertinent question arises: whether the law enforcer is liable and, if so, who is responsible? Several theoretical answers can be proposed, with some options being deemed unacceptable:

a) The legislator may be considered the law enforcer, as AI or digitalized decision-making is utilized by administrative authorities when making decisions that are already outlined in the law.

b) The administrative authority could be held responsible, as AI makes decisions on its behalf.

c) The AI itself may be deemed liable, as it operates without human intervention, although it currently lacks legal personality.

d) The operator of the AI system bears responsibility for ensuring its safe operation. However, if the AI system is operated by a non-administrative authority, such as a private Hungarian or non-Hungarian company, additional complexities regarding responsibility arise.

e) The client could be considered the law enforcer in cases where administrative procedures are initiated upon request, as the decision being influenced by the applicant's request.

f) The legal representative of the applicant (client) may be held accountable if legal representation is mandatory. However, this requirement may not necessarily enhance the efficiency of administrative procedures.

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[21] See: BICSKEI Tamás: A mesterséges intelligencia közigazgatásban való felhasználásával okozott kár, KözigazgatásTudomány, 2023:1 99-114.; TÓTH András: A mesterséges intelligencia szabályozásának paradoxonja és egyes jogi vonatkozásainak alapvető kérdései, Infokommunikáció és jog, 2020. 16 : 73. 3-14.

[22] See: F. ROZSNYAI Krisztina - ISTENES Attila: Gondolatok a közigazgatási jogkörben okozott kár megtérítése iránti igény érvényesítésének új lehetőségeiről, Jogtudományi Közlöny, 2017. 559-568.

[23] BICSKEI Tamás 2023. 108.

g) In cases where the law is applied solely by software (AI), there may be no identifiable law enforcer, and therefore no one to hold responsible.[24]

According to certain viewpoints, if AI is responsible for making administrative decisions or if a decision is reached through digitalized administrative processes, it is believed that the public authority may be held accountable for damages under the regulations outlined in Act V of 2013 within the Hungarian Civil Code.[25] According to Article 6:548, paragraph 2 of this Code: „The legal person exercising public authority shall be liable for the damage caused in the course of exercising administrative powers. If the person exercising public powers is not a legal person, the administrative organ with legal personality under the auspices of which the proceeding administrative organ operates shall be liable for the damage." Regarding the release of the liability within this context, the key question is whether it can be thoroughly evaluated, and if so, how it should be approached in the case of the AI system, specifically the "evident and overwhelmingly serious error in law enforcement, interpretation of the law, and the overly blatant assessment of the facts." [26]

Finally, it should be noted that in 2022, the European Union introduced a directive on liability concerning artificial intelligence,[27] with the goal of enhancing the protection of individuals harmed by AI technologies. Certainly, the adoption of this directive would also have a significant impact on the legal assessment of damages caused by the administrative authority using AI. However, the legislator has yet adopted this directive, and we think that in the new AI Act there are some "elements of distrust" that impact the issue of responsibility too. This is evident in the requirement for trained supervisory personnel to be present when utilizing AI systems, with the ability to deactivate AI if needed. Therefore we strongly believe, that before applying AI, it necessary to develop a system of liability for possible damages caused by authority decisions made through AI/digitalized administrative processes.

[24] See: CSEH-ZELINA, Gergely - CZÉKMANN, Zsolt - RITÓ, Evelin: Az automatikus döntéshozatal helye és szerepe a hatósági eljárásban, KözigazgatásTudomány 2022: 2 35-47.
[25] BICSKEI Tamás 2023. 108.
[26] FUGLINSZKY Ádám: Kártérítési jog, HVG-ORAC, Budapest, 2015. 524.
[27] See: online: https://eur-lex.europa.eu/legal-content/HU/TXT/?uri=CELEX:52022PC0496

5. Conclusion

In conclusion, the definitions and regulations surrounding automated decision-making and AI in Hungary underscore the evolving landscape of administrative procedures in the digital era. The introduction of automated decision-making has significantly transformed administrative processes, leading to increased efficiency and improved accessibility. Meanwhile, the definition and application of AI in administrative procedures have reshaped the nature of decision-making, presenting new challenges and opportunities. The responsible implementation of AI and digitalization hinges on the careful consideration of ethical, legal, and technological aspects. Moreover, the case of digital alternative dispute resolution in relation to consumer rights stands as a successful example of the positive impact of digitalization in consumer protection rules. However, the responsibility associated with AI and digitalized administrative decision-making remains a complex and pressing issue, necessitating careful legal assessment. As the European Union introduces directives on liability concerning artificial intelligence and AI-Act, it is imperative for the legislature to address these concerns and develop a comprehensive system of accountability for potential damages caused by AI-powered administrative decisions. The continuous evolution of administrative procedures with AI integration calls for a proactive and collaborative approach to ensure fairness, transparency, and the protection of individual rights in the digitized era.

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