

# DOES E-GOVERNMENT REVIVE PUBLIC TRUST AND LEGAL CERTAINTY

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## Abstract

*This study investigates Hungary's electronic government (e-gov) initiatives, focusing specifically on the education sector and assessing their compliance with European Union (EU) information and communications regulations. Key research questions address how Hungary's e-gov initiatives, mainly through the Neptune platform and EnterHungary website, impact legal certainty and public trust. The study argues that while Hungary's e-gov framework has streamlined public administration and contributed to the country's favorable standing in human development indices, new EU regulatory requirements have introduced challenges that slow public service efficiency. This normative research combines public surveys with legal analysis to evaluate Hungary's adherence to information technology laws and explore citizens' perceptions of trust and reliability in e-gov services. Findings reveal significant barriers, including regulatory compliance issues and a need for improved transparency, which impact both legal certainty and public trust. The study suggests strategic recommendations for aligning Hungary's e-gov services with EU standards to enhance service quality and trustworthiness, ultimately supporting the sustainable implementation of e-government across sectors.*

**Keywords:** e-Government, Technology, Hungary, Legal Certainty, Public Trust

## Introduction

The rapid advancement of technology is undeniably transformative by its nature whereas today as societal changes unfold daily alongside technology, our lives will always be in constant flux. For instance, in the 21<sup>st</sup> century, our communication methods have evolved dramatically transitioning from handwritten letters to instantaneous electronic communication via mail. In addition to this, we can now order food without visiting a restaurant, utilize parking machines seamlessly, transfer money through our smartphones, and manage administrative tasks without stepping into governmental offices. This technological progress has minimized the

need for face-to-face interactions, as a growing array of services are now available in the digital world. However, such a transformative shift is not without challenges. Legal uncertainty and pervasive distrust from both public society and government agencies often continue to hinder the full potential of these advancements.

“EnterHungary” is an official government portal designed to simplify the immigration process for foreign nationals entering Hungary. This digital platform allows users to efficiently manage visa applications, resident permit requests, and other immigration-related tasks. Similarly, “Neptune” serves as the administrative system utilized by Hungarian universities to

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oversee academic records, course registrations, and student information. Both these platforms are integral components of the wider Hungry e-Gov initiatives, which aim at enhancing efficacy and alleviating the bureaucratic burden on citizens and residents. By digitizing processes that traditionally required some form of in-person interactions, these systems strive to provide greater transparency, accessibility, and expedited services for all its users.

Administrative issues, legal certainty, and public trust are critical considerations in the context of both entrepreneurship and student administration, particularly in platforms such as EnterHungary. While this official government portal enhances convenience for foreign nationals navigating immigration processes, it is not without its challenges. Users may encounter administrative hurdles and technical glitches that can often undermine both legal certainty and public trust. For example, ambiguous instructions, delays in application processing, and inconsistent communication from immigration authorities can create uncertainty regarding the legal status of applications, leading to confusion and potential disruptions for applicants. Furthermore, when users feel that their rights and obligations are not articulated or perceive the platform as unreliable, their trust in the system erodes, possibly violating these administrative principles. To maintain public confidence in EnterHungary and, by extension, in Hungary's broader e-Gov initiatives, it is essential to uphold the principles of legal certainty—ensuring that procedures are transparent, predictable, and consistently applied. As previously discussed, while technology facilitates many

aspects of public service, it is crucial to remember that the foundation of effective public services lies in legal certainty, which ultimately fosters trust in these critical matters.

### **What is Legal Certainty and Public Trust?**

Legal certainty has been a cornerstone of Western legal theory for centuries. As law and certainty are regarded as the 'heart' of regulation, a thorough understanding of regulation is essential, as it forms the foundation of legal principles. Essentially, legal principles represent the standard norms of ethical values that underpin the regulatory process. Consequently, these principles, which encompass ethical norms, ensure that parties affected by legal circumstances are safeguarded from arbitrary or capricious treatment by government agencies.<sup>1</sup> This assertion is further supported by Van Apeldoorn, who highlights two key aspects of legal certainty:<sup>2</sup> first is the importance of understanding the current implications of one's circumstances, and second, the awareness of potential actions that individuals can take when engaging in activities with legal consequences. By ensuring clarity and predictability, legal certainty fosters a fair and just legal environment for all parties involved.

Furthermore, legal certainty stands at the heart of law as a social science, reflecting its fundamental role in shaping human behavior and ensuring the smooth functioning of society. It is a key concept that underpins the rule of law, providing individuals and institutions with clarity, predictability, and stability in legal matters.

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<sup>1</sup> Kordela, M. (2008). The Principle of Legal Certainty As A Fundamental Element of The Formal Concept of The Rule of Law. *Revue du notariat*, 110(2), 587-605. [Http://doi.org/10.7202/104553ar](http://doi.org/10.7202/104553ar).

<sup>2</sup> van Apeldoorn, L. (2021). Hobbes on Property: Between Legal Certainty and Sovereign Discretion. *Hobbes Studies*, 34(1), 58-79. <https://doi.org/10.1163/18750257-bja10024>.

The principle of legal certainty ensures that laws are not only accessible and understandable but also applied consistently over time. This consistency is vital for fostering public trust in legal institutions, as it enables individuals to anticipate the consequences of their actions within a legal framework. Without legal certainty, the social order would be jeopardized, as citizens would face arbitrary or unpredictable enforcement of laws, leading to confusion, instability, and erosion of trust in governance. As theorists like Max Weber have argued, modern legal systems are characterized by formal rationality, where the law is constructed as a logical, coherent system that provides clear guidance to individuals on acceptable conduct (Weber, 1978).<sup>3</sup> Legal certainty supports this rationalization by ensuring that laws are explicit and enforceable, allowing individuals to make informed decisions based on an understanding of legal consequences. In this way, law not only regulates social interactions but also reflects and reinforces societal norms and values, contributing to the cohesion of society as a whole.

Therefore, from the explanation above it is clear that legal certainty is closely linked to the idea of fairness in law, as it prevents the arbitrary exercise of power by authorities. As the European Court of Human Rights has noted, the principle of legal certainty is essential for safeguarding individuals against unjust treatment by public authorities (European Court of Human Rights, 2021).<sup>4</sup> By ensuring that laws are applied uniformly and predictably, legal certainty helps protect fundamental rights and freedoms, providing citizens with a secure environment in which they can act

without fear of unexpected legal repercussions. Thus, legal certainty forms the backbone of both the legitimacy and efficacy of legal systems in modern societies.

In the realm of administrative law, legal certainty assumes even greater importance, as it profoundly influences the relationship between government bodies and the public. Administrative law regulates the actions of public officials and institutions, ensuring that their decisions align with established legal standards. In this context, legal certainty necessitates that administrative decisions are made transparently, grounded in clear legal provisions and that citizens have access to effective remedies when adversely affected by government actions. Legal scholars emphasize that administrative decision-making must be anchored in the principles of consistency and fairness, both of which are fundamentally supported by legal certainty.<sup>5</sup> When legal certainty is absent in administrative processes, citizens may encounter unpredictable outcomes, which can lead to a significant decline in trust in public institutions. Thus, maintaining legal certainty is essential for fostering a reliable and accountable administrative framework that upholds the rights and expectations of the public.

The growing reliance on information technology ('IT') in public administration and governance—often termed e-government ('e-gov')—introduces significant complexities to the notion of legal certainty. As governments worldwide adopt digital platforms to deliver public services and manage administrative processes, the need for clear, reliable legal frameworks becomes even more pressing in

<sup>3</sup> Weber, M. (1978). *Economy and Society: An Outline of Interpretive Sociology*. University of California Press.

<sup>4</sup> European Convention on Human Rights, 213 U.N.T.S. 222 (1950), Article 6.

<sup>5</sup> Craig, P. (2021). *Administrative Law*. Sweet & Maxwell.

the digital age, legal certainty encompasses the imperative that technological applications in governance align with established legal principles, particularly concerning data protection, cybersecurity, and the legitimacy of electronic transactions. E-gov systems facilitate interactions between citizens and government authorities through digital interfaces, enabling activities such as submitting applications, accessing public records, and even casting votes online. It is essential that these processes are underpinned by transparent legal standards that safeguard the security, privacy, and integrity of digital engagements.

This role of legal certainty in information technology is highlighted by the challenges posed by rapidly evolving technologies such as artificial intelligence ('AI'), blockchain, and cloud computing. As new technologies are integrated into administrative processes, existing legal frameworks often struggle to keep pace, leading to gaps in regulation and legal uncertainty. For instance, the application of blockchain technology in public registries and smart contracts raises critical questions regarding the legal status of digital records and the enforceability of automated agreements (Tapscott & Tapscott, 2016).<sup>6</sup> In this context, legal certainty is crucial for ensuring that the rights of citizens and businesses are protected when interacting with these new technologies.

In Europe, the General Data Protection Regulation ('GDPR') serves as an example of an effort to establish legal certainty in the digital realm. The GDPR provides clear rules on how personal data must be handled

by both public and private entities, ensuring that citizens' privacy is protected in the digital age. This regulation addresses the need for legal certainty by offering clear guidelines on data collection, storage, and processing, as well as the legal obligations of organizations that handle personal data. By providing a uniform legal framework across the European Union, the GDPR enhances legal certainty for both individuals and businesses, fostering trust in digital services (Voigt & Von dem Bussche, 2017).<sup>7</sup>

In the context of e-govs, legal certainty such as those brought by the GDPR ensures that digital platforms are accessible and secure, promoting greater public trust in digital governance. When citizens are confident that their digital interactions with government agencies are secure and legally valid, they are more likely to engage with these platforms, leading to greater adoption of e-government services. Conversely, legal uncertainty in the digital space—such as unclear regulations regarding electronic signatures or digital identities—can undermine public trust and reduce the effectiveness of e-government initiatives (Pérez-Morote et al., 2020).<sup>8</sup>

Therefore, legal certainty is a core element of law as a social science, providing the stability and predictability necessary for the effective functioning of society. Its importance is magnified in the context of administrative law and information technology, where legal frameworks must adapt to the complexities of digital governance while maintaining transparency, fairness, and protection of citizens' rights.

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<sup>6</sup> Tapscott, D., & Tapscott, A. (2016). *Blockchain Revolution: How the Technology Behind Bitcoin is Changing Money, Business, and the World*. Penguin.

<sup>7</sup> Voigt, P., & Von dem Bussche, A. (2017). *The EU General Data Protection Regulation (GDPR): A Practical Guide*. Springer International Publishing.

<sup>8</sup> Pérez-Morote, R., Pontones-Rosa, C., & Núñez-Chicharro, M. (2020). The Effects of E-Government Evaluation, Trust and the Digital Divide in the Adoption of E-Government Services in Europe. *Technological Forecasting and Social Change*, 154.

Ensuring legal certainty in these areas is essential for fostering public trust in both traditional and digital governance systems, making it a critical consideration for modern legal and administrative practices.

Public trust on the other hand can be conceptualized as the confidence that society places in the government regarding information and administrative matters. This trust is evaluated through the effectiveness of government programs, innovations, and services. Rooted in the Public Trust Doctrine ('PTD'), this principle has its origin in Roman law and is prevalent in countries with public agreements that govern the management of natural resources. Over time, the PTD doctrine has significantly evolved, particularly in the context of environmental and natural resource disputes in the United States, marking a substantial advancement in environmental law.<sup>9</sup> As Richard Frank asserts the PTD is a foundational doctrine for environmental law and natural resource management.<sup>10</sup>

As was the case since Roman antiquity, the PTD has aimed to protect public spaces that are open and accessible to all citizens, grounded in the trust placed in state institutions. The PTD is employed in various countries where this inherent trust diminishes the need for formal written agreements between the state and society.<sup>11</sup> Private law can be compared to the relationship between property managers and tenants in a rental agreement. In this

scenario, the tenant is responsible for maintaining the cleanliness of their unit, while the manager is obligated to ensure the overall upkeep of the property and repair any damaged communal facilities. This relationship exemplifies the trust that exists between both parties, as they are each responsible for preserving the shared environment for future tenants. In public law, the concept of public trust is deeply rooted in the principles of democratic governance, emphasizing that the true power and future of society lie within its citizens. Therefore, the trust that citizens place in their officials must be respected and upheld. In the United States, PTD regulations are enshrined in state constitutions to protect and conserve the environment.<sup>12</sup> At least five states incorporate the PTD into their governmental frameworks, although the principle is not explicitly mentioned in most state constitutions or the United States Constitution. This highlights the ongoing importance of the Public Trust Doctrine in ensuring that public resources are managed responsibly and in the public interest.

### Research Methodology

The research follows a review process of the method suggested by Webster and Watson,<sup>13</sup> focusing on the literature surrounding the value of e-gov. A literature review on specific topics becomes particularly relevant when an event prompts

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<sup>9</sup> Solomon, C. (2016, May 27). The Newest Legal Tool to Fight Climate Change is as Old Ancient Rome. *Outside*. <https://www.outsideonline.com/2083441/newest-legal-tool-fight-climate-change-old-ancient-rome>.

<sup>10</sup> M. Frank, R. (2012). The Public Trust Doctrine: Assessing Its Recent Past & Charting Its Future. *University of California, Davis*, 45(665). <https://www.law.gwu.edu/sites/g/files/zaxdzs5421/files/downloads/FrankThePublicTrustDoctrine.pdf>.

<sup>11</sup> C. Wood, Mary. (2009). Advancing The Sovereign Trust of Government to Safeguard The Environment for Present and Future Generations (Part II): Instilling A Fiduciary Obligation in Governance. *Lewis & Clark Law School ENVTL L.* 39(91).

<sup>12</sup> Sun, H. (2011). Toward A New Social-Political Theory of The Public Trust Doctrine. *Vermont Law Review* 565.

<sup>13</sup> Webster, J., & Watson, R. T. (2002). Analyzing the Past to Prepare for the Future: Writing a Literature Review. *MIS Quarterly*, 26(2), R13.

a new research inquiry. In this literature review process, the focus will be on the concept of legal certainty, which is a fundamental characteristic of law, as well as the principle of public trust, which stems from elements of common law. By examining these critical concepts, the research aims to provide a comprehensive understanding of their significance in the context of e-gov. In the quest to answer the two research questions, the authors intend to break down the elements of legal certainty and define the trust between citizens and the government by using a holistic approach. This approach involves a combination of the following steps:

1. Identify the elements of legal certainty in administrative and information technology; and

2. Assessing PTD elements through e-gov processes in Hungary.

This research will also examine the digital interfaces of EnterHungary and Neptune, specifically designed for international students, to highlight the critical importance of legal certainty and information rights. The author will analyze these platforms to assess the significance of the translated information provided and the duration of the bureaucratic processes that international students face in Hungary. Additionally, the author will compare these interfaces with those of websites in other countries to evaluate the adoption of administrative and electronic information systems. This comparative analysis will enhance our understanding of how different countries facilitate access to essential information for international students.

## Results and Discussion

### Defining Legal Certainty as a Legal Principle

Grasping the fundamental concept of law, particularly legal certainty, is essential, as the law relies on the predictability of outcomes. Law is a systematic framework of rules created by humans to establish order within a society, and therefore, it must be adhered to. In the context of legal principles within a country, which encompasses both government officials and citizens, laws should be formulated in advance, made widely known, and presented in an easily understandable manner. This approach ensures that all parties can navigate the legal landscape with clarity and confidence.<sup>14</sup> In a formal definition, theoretical perspectives on legal certainty emphasize that it encompasses not only substantive and material aspects but also procedural dimensions. Understanding these procedural aspects is crucial, as they highlight the significance of timely responses within the legal decision-making process. Legal certainty, therefore, is defined by its ability to ensure that procedures are transparent and predictable, facilitating fair and informed outcomes.<sup>15</sup> Moreover, when interpreting legal certainty, there is often a reliance on personal judgment, as human decisions can be influenced by the risks of discrimination and unfair treatment. However, in the context of e-govs and administrative processes, interpretations of legal certainty frequently overlook the formal and procedural dimensions, primarily because human involvement remains integral to the system. For instance, tasks such as

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<sup>14</sup> Tamanaha, BZ. (2012). The History and Elements of the Rule of Law. *Singapore Journal of Legal Studies* 12, 232–247; Raz, J. (1979). The Authority of Law: Essays on Law and Morality. Oxford: Clarendon Press.

<sup>15</sup> Taekema, S. (2013). The Procedural Rule of Law: Examining Waldron's Argument on Dignity and Agency. *Annual Review of Law and Ethics* 21, 133–146.; Berteau, S. (2008). Towards a New Paradigm of Legal Certainty. *Legisprudence* 2(1), 25–45.

interpreting documents, verifying data validity, and cross-referencing information with other agencies can complicate the definition of legal certainty. These additional factors can hinder the realization of true legal certainty, as they introduce variability and potential bias into the decision-making process.

Hence when assessing legal certainty, it is important to consider the element of foreseeability. Foreseeability here is defined as the ability to predict the legal consequences that may arise from fulfilling or failing to fulfill certain conditions and plays a crucial role in assessing legal certainty. For instance, if government agencies do not provide timely decisions on specific requests from citizens, those citizens may face penalties or repercussions for being unable to meet certain prerequisites. When examining e-gov services in Hungary, it becomes evident that Hungarian agencies often fail to specify the duration required to process public requests. This lack of clarity undermines foreseeability, leaving citizens uncertain about the timeline and potential outcomes of their interactions with the government. Such ambiguity can significantly impact their ability to navigate legal obligations effectively.

### **Issues in Legal Certainty During the Hungarian Law-Making Process**

Legal certainty is vital in ensuring that laws are clear and consistently applied, which fosters trust in governance. In Hungary, however, the e-gov framework lacks this crucial element. The legal system has struggled to keep pace with rapid technological advancements, leading to uncertainty in key areas like data protection,

cybersecurity, and digital signatures. This has confused both citizens and businesses, as inconsistent or outdated regulations undermine confidence in digital platforms. Additionally, sudden regulatory changes without adequate public consultation further exacerbate this issue.<sup>16</sup>

Adding fuel to the fire, the Hungarian government has also introduced sudden regulatory changes in its e-gov systems without proper public consultation. Such changes exacerbate the issue of legal uncertainty, as citizens and businesses need more guidance to adapt to new rules. This lack of transparency in the legislative process deepens mistrust in e-gov platforms, as users feel unprotected and uncertain about their rights and obligations under the law. Without public input, laws governing e-government systems often fail to meet users' needs, diminishing their effectiveness. In addition, Hungary's e-gov system is compounded by the government's fragmented approach to legal reform. Legal gaps and ambiguities make it easier for certain actors to exploit loopholes, particularly in public procurement, where e-government systems are used for awarding contracts. This raises concerns about fairness and accountability and erodes public confidence in the legal and governance systems that underpin digital services. Addressing these legal shortcomings through more transparent, more consistent legislation and a more inclusive regulatory process is crucial for restoring public trust and enhancing the effectiveness of Hungary's e-government initiatives.

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<sup>16</sup> Group of States Against Corruption (GRECO). (2023). Fifth Round Evaluation on Hungary. *Council of Europe*. <https://rm.coe.int/fifth-evaluation-round-preventing-corruption-and-promoting-integrity-i/1680ab87f5>.

### **The Importance of Ensuring Legal Certainty in E-Government**

Legal certainty is a fundamental principle in any governance framework, ensuring that laws are clear, precise, and predictable. In the realm of e-gov, this principle takes on heightened importance, as it directly affects how citizens engage with digital services and the level of trust they place in governmental processes. E-gov systems depend heavily on digital platforms for delivering public services, necessitating a robust legal framework that guarantees the legality and reliability of online transactions. Establishing legal certainty provides citizens and administrators with clear guidelines and expectations regarding digital processes, their rights in these interactions, and the legal implications of utilizing these services.<sup>17</sup>

To ensure this legal certainty in e-gov, the legal framework needs to be continuously updated to address evolving digital technologies and the various risks associated with digital processes. This includes developing new laws and regulations specifically tailored for digital interactions, such as data protection laws, electronic signatures, and cybersecurity regulations. These legal measures help reduce ambiguities by setting clear standards for the authentication of users, the integrity of data, and the validation of digital documents. A transparent legal environment fosters confidence in e-government platforms, leading to higher adoption rates by the public and reducing resistance to innovative technologies.

Another essential aspect of legal certainty in e-gov is its role in mitigating risks of fraud and misuse. With clear legal

rules in place, governments can hold individuals and organizations accountable if they misuse e-gov platforms, thereby protecting the integrity of the system. For example, digital contracts signed via e-government platforms need to be legally binding, and any disputes over such contracts must have clear legal remedies. Without legal certainty, citizens may hesitate to use these platforms, fearing that their rights might not be adequately protected or that the government might not be held accountable for its digital services.

On the other hand, a situation of legal uncertainty presents significant challenges to the successful implementation of e-gov systems. Legal uncertainty occurs when laws are ambiguous, outdated, or not adequately adapted to address recent technologies. In this context, this can manifest in several ways, such as unclear regulations regarding the use of digital signatures, insufficient guidelines on how personal data is processed, or gaps in the law when it comes to the legal status of digital documents. Legal uncertainty can undermine public trust in e-government systems, reducing their effectiveness and discouraging citizens from engaging with online services. One primary cause of legal uncertainty in e-gov is the rapid pace of technological advancement, which often outstrips the legislative process. Laws, particularly in the realm of digital governance, can struggle to keep up with recent technologies such as artificial intelligence, blockchain, or cloud computing. For instance, the legal framework may not yet fully address the implications of blockchain technology for recording public transactions, leading to

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<sup>17</sup> Maxeiner, James R. (2008). Some Realism About Legal Certainty in the Globalization of the Rule of Law. *Houston Journal of International Law*, 31(1), 27-46. <https://ssrn.com/abstract=1471563>; Delimatsis, P. (2007). *International Trade in Services and Domestic Regulations - Necessity, Transparency, and Regulatory Diversity*. Oxford University Press. <https://ssrn.com/abstract=1471563>.



uncertainty about its admissibility in court or its alignment with data protection regulations. As innovative technologies emerge, governments must respond quickly by updating their legal systems, or they risk creating an environment where e-government initiatives are implemented without sufficient legal support. Moreover, legal uncertainty in e-gov can create an uneven playing field where some entities or individuals may exploit ambiguities in the law to their advantage. This is particularly concerning in areas like public procurement, where e-government systems are used to facilitate the awarding of contracts. If the legal rules governing these processes are unclear, it may lead to inconsistencies in how contracts are awarded, with some players benefiting from loopholes or vague interpretations. This not only threatens the fairness of the system but can also lead to legal disputes, which, in turn, further erode public trust in e-government.

Another dimension of legal uncertainty arises from the cross-jurisdictional nature of many e-gov services, especially in countries with decentralized or federal systems of governance. Different regions or states may have varying legal interpretations of e-government processes, leading to confusion about which laws apply to specific transactions. For example, a digital service provided at the federal level may be subject to different data protection standards in individual states, creating uncertainty for both service providers and users. Harmonizing legal standards across jurisdictions is crucial for reducing this uncertainty and ensuring a consistent user experience.

### **Balancing Legal Certainty and Flexibility**

While legal certainty is essential for the smooth functioning of e-gov systems, it

is also important to balance it with a degree of flexibility. Over-regulation or rigid legal frameworks can stifle innovation and make it difficult for governments to adapt to new technologies or societal needs. For instance, if laws governing e-government processes are too prescriptive, they may limit the ability of government agencies to experiment with new digital services or to implement more efficient technological solutions. Therefore, while legal certainty provides the stability necessary for e-government processes to function, it must be accompanied by flexible regulatory mechanisms that can accommodate future developments.

One way to achieve this balance is through adaptive legal frameworks that can evolve alongside technological advancements. These frameworks could include provisions for regular reviews of e-gov laws or mechanisms that allow governments to issue temporary regulations that can be tested and adjusted as needed. By incorporating flexibility into the legal system, governments can ensure that e-gov platforms remain both legally sound and adaptable to new technologies. Additionally, governments could establish legal ‘sandboxes’ where innovative digital services can be tested under relaxed regulations before they are fully implemented, providing a controlled environment for legal experimentation without sacrificing certainty.

### **Trust in Public Administration**

Trust in public administration is a multifaceted concept that has garnered significant attention in marketing

literature.<sup>18</sup> It is essential for sustaining long-term relationships.<sup>19</sup> Consequently, trust building is regarded as a primary objective by numerous organizations due to its correlation with various advantageous outcomes (including commitment, loyalty, and positive word-of-mouth).<sup>20</sup> Trust is commonly defined as the readiness of one party to be vulnerable to the actions of another, predicated on the expectation that the latter will undertake a specific action, regardless of the trustor's capacity to oversee or regulate.<sup>21</sup>

Like corporations, governments in public management seek to enhance citizens' trust in public administration, dedicating time and resources to accomplish this objective and sustain satisfactory long-term relationships with citizens. Research in public administration has observed a significant decrease in citizen trust in governments globally,<sup>22</sup> particularly in Europe.<sup>23</sup> Nonetheless, no consensus exists

regarding the essential factors that enhance or diminish trust.<sup>24</sup> Diverse factors, including political scandals, economic instability, mass media information, government popularity, and governmental performance, have been identified as potential determinants of governmental trustworthiness.<sup>25</sup> E-gov research has highlighted trust as a vital component that demands careful scrutiny.<sup>26</sup> Nevertheless, the majority of e-gov studies primarily regard trust as a precursor to the adoption of e-services or concentrate solely on trust within a particular public e-service.<sup>27</sup> Conversely, limited research has concentrated on trust in public administration as a comprehensive entity, treating it as an independent variable.<sup>28</sup> Establishing trust in the government is regarded as a factor influencing e-gov

<sup>18</sup> Morgan, R., & Hunt, S. (1994). The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*, 58 (3), 20-38; Doney, P., & Cannon, J. (1997). An Examination of the Nature of Trust in Buyer-Seller Relationships. *Journal of Marketing*, 61(2), 35-51.

<sup>19</sup> Anderson, J., & Narus, J.A. (1990). A Model of Distribution Firm and Manufacturer Firm Working Partnerships. *Journal of Marketing*, 54 (1), 42-58.

<sup>20</sup> *Ibid.*

<sup>21</sup> Mayer, R., Davis, J., & Schoorman, F. (1995). An Integrative Model of Organizational Trust. *Academy of Management Review*, 20(3), 709-734.

<sup>22</sup> Al-Adawi, Z., Yousafzai, S., & Pallister, J. (2005). Conceptual Model of Citizen Adoption of E-Government. *The Second International Conference on Innovations in Information Technology (IIT)*.

<sup>23</sup> Bannister, F., & Connolly, R. (2011). Trust and Transformational Government: A Proposed Framework for Research. *Government Information Quarterly*, 28(2), 137-147; Corporate Excellence. (2012). Cae la confianza en empresas e instituciones y sube en expertos e iguales. *Documentos de Estrategia*, 116/2012.

<sup>24</sup> Solomon, C. (2016, May 27). The Newest Legal Tool to Fight Climate Change is as Old Ancient Rome. *Outside*. <https://www.outsideonline.com/2083441/newest-legal-tool-fight-climate-change-old-ancient-rome>.

<sup>25</sup> C. Wood, Mary. (2009). Advancing The Sovereign Trust of Government to Safeguard The Environment for Present and Future Generations (Part II): Instilling A Fiduciary Obligation in Governance. *Lewis & Clark Law School ENVTL L*. 39(91).

<sup>26</sup> Beldad, A., Van Der Geest, T., de Jong, M., & Steehouder, M. (2012). A Cue or Two and I'll Trust You: Determinants of Trust in Government Organizations in Terms of their Processing and Usage of Citizens' Personal Information Disclosed Online. *Government Information Quarterly*, 29 (1), 41-49.

<sup>27</sup> Bélanger, F., & Carter, L. (2008). Trust and Risk in E-Government Adoption. *Journal of Strategic Information Systems*, 17 (2), 165-176; Belanche, D., Casaló, L. V., & Guinalfú, M. (2012). How to Make Online Public Services Trustworthy. *Electronic Government: An International Journal*, 9(3), 291-308.

<sup>28</sup> Bélanger, F., & Carter, L. (2008). Trust and Risk in E-Government Adoption. *Journal of Strategic Information Systems*, 17 (2), 165-176; Belanche, D., Casaló, L. V., & Guinalfú, M. (2012). How to Make Online Public Services Trustworthy. *Electronic Government: An International Journal*, 9(3), 291-308.

adoption rather than a standalone public policy objective.<sup>29</sup>

Public trust in government is essential for fostering the principles of good governance. The PTD doctrine, although rooted in environmental law, is closely linked to contemporary notions of good governance.<sup>30</sup> This framework encompasses key elements such as transparency and accountability, which redefine the role of governments in delivering public services. By enhancing these aspects, governments can significantly strengthen public trust and confidence in their actions.<sup>31</sup>

EnterHungary, a key public service platform in Hungary, lacks the transparency necessary to instill confidence among citizens. Despite a significant increase in internet users in the country,<sup>32</sup> there is no clear evidence of public satisfaction with the Hungarian government's website. A 2017 survey even indicated that the government is moving in the wrong direction, suggesting that the quality of e-services provided by Hungarian agencies fails to support democratic principles.<sup>33</sup> The interactions between citizens and the government through these e-services can be viewed as

contractual relationships, where rights and obligations are established. Furthermore, the perceived absence of adequate accountability mechanisms only exacerbates public mistrust and undermines the government's credibility. Thus, to improve e-service quality, effective management is crucial, especially given the diverse population in Hungary.

### Inadequate mechanism

### Accountability

In Hungary, the mechanisms for administrative accountability within e-gov are inadequate. The absence of a robust accountability framework can significantly undermine public trust in government institutions. Accountability in digital governance is crucial, as it empowers citizens to hold authorities responsible for arbitrary actions, particularly when discretion is involved.<sup>34</sup> Unfortunately, the Hungarian government has demonstrated a consistent decline in accountability, with many agencies operating without sufficient oversight.<sup>35</sup> This lack of oversight is

<sup>29</sup> Arduini, D., & Zanfei, A. (2014). An Overview of Scholarly Research on Public E-Services? A Meta-analysis of the Literature. *Telecommunications Policy*, 38(5), 476-495.

<sup>30</sup> Kaufmann, D., Kraay, A., & Mastruzzi, M. (2009, June 29). Governance Matters 2009: Learning From Over a Decade of the Worldwide Governance Indicators. *Brookings*. <https://www.brookings.edu/articles/governance-matters-2009-learning-from-over-a-decade-of-the-worldwide-governance-indicators/>.

<sup>31</sup> Pillay, P. (2017). Public Trust and Good Governance A Comparative Study of Brazil and South Africa. *African Journal of Public Affairs*, 9(8), 31-47. *Affairs*, 9(8), 31-47.

<sup>32</sup> Kemp, S. (2024, February, 24). Digital 2024: Hungary. *DataReportal*. <https://datareportal.com/reports/digital-2024-hungary>.

<sup>33</sup> Ipsos Hungary Zrt. (2017, November 30 – December 20). *Public Opinion in Hungary*. Center for Insights in Survey Research 2017, Hungary. [https://www.iri.org/wp-content/uploads/2018/04/hungary\\_poll\\_presentation.pdf](https://www.iri.org/wp-content/uploads/2018/04/hungary_poll_presentation.pdf).

<sup>34</sup> 5 U.S. Code §706 (1966). <https://www.law.cornell.edu/uscode/text/5/70>; Nicolaidis, P., & Preziosi, N. (2014). Discretion and Accountability: An Economic Analysis of the ESMA Judgment and the Meroni Doctrine. *Intereconomic* 49, 279-287. DOI: 10.1007/s10272-014-0510-2.

<sup>35</sup> Civic Space Watch. (2023, December 14). HUNGARY: Parliament passes the "Defence of Sovereignty" bill despite concerns from CSOs and journalists. *European Civic Forum*. <https://civicspacewatch.eu/hungary-draft-defence-of-sovereignty-bill-concerning-for-csos-and-journalists/>; Wahl, T. (2024, February 22). Hungary: Rule-of-Law Developments May 2023 - Mid-January 2024. *Eucrim*. <https://eucrim.eu/news/hungary-rule-of-law>

reflected in the persistent levels of corruption and inefficiencies within legal and institutional frameworks, which have remained unchanged since 2022, placing Hungary among the lowest in the EU in this regard.<sup>36</sup> The high levels of corruption across the EU further exacerbate the situation, as the failure to ensure accountability and transparency deepens public distrust in government agencies, particularly concerning the digital initiatives undertaken by the Hungarian government.<sup>37</sup> Furthermore, Hungary's failure to implement effective accountability mechanisms reveals that government agencies generally lack sufficient oversight. This deficiency not only fosters public distrust but also jeopardizes the government's ability to fulfill its obligations to its citizens.

### **Major Barriers to Legal Certainty and Public Trust in Hungary's E-Government Services**

Despite the benefits of e-gov, several factors can undermine public trust in these systems. One of the major sources of frustration for users of e-gov services is

technical failures. If a government website frequently crashes, experiences downtime, or suffers from poor performance, citizens may lose confidence in the system. For example, the Healthcare.gov rollout in the United States faced widespread criticism due to its technical issues, which severely undermined public trust in the platform and the broader healthcare reform efforts.<sup>38</sup> Technical failures and system downtimes can compromise both legal certainty and public trust, creating significant barriers.<sup>39</sup> When systems that support digital legal processes or public services malfunction, they can introduce ambiguity regarding the status of legal procedures,<sup>40</sup> further eroding public confidence. For example, when online systems or e-governance platforms crash, or when they fail to provide timely updates on requests for government documents, individuals and businesses may experience delays or interruptions in their legal processes. This can lead to uncertainties about deadlines, rights, and obligations. Therefore, maintaining legal certainty and public trust is essential for the

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developments-may-2023-mid-january-2024/; R. Apaza, Carmen. (2008). The Importance of Bureaucratic Oversight Mechanisms: The Case of the Inspector General. *Journal of the Washington Institute of China Studies*, 3(3), 23-41.

<sup>36</sup> Transparency International. (2023, November). Corruption Perceptions Index: Hungary. *Transparency International*. <https://www.transparency.org/en/countries/hungary>; M. Jávör, Dénes., Ligeti, M., P. Martin, J., & Zeisler, J. (2023). Hungary is the most corrupt Member State of the European Union. *Transparency International*. [https://transparency.hu/wp-content/uploads/2023/02/TI\\_Hu\\_CPI\\_2022\\_report\\_en.pdf](https://transparency.hu/wp-content/uploads/2023/02/TI_Hu_CPI_2022_report_en.pdf).

<sup>37</sup> Council of Europe. (2024, June 9). Hungary - Publication of 5th Round Evaluation Report and 4th Interim Compliance Report of 4th Round. *Council of Europe*. <https://www.coe.int/en/web/greco/-/hungary-publication-of-5th-round-evaluation-report-and-4th-interim-compliance-report-of-4th-round>.

<sup>38</sup> Jones, L. R., & Kettl, D. F. (2014). Assessing Public Management Reform in an International Context. *International Public Management Review*, 4(1), 1-19. <https://ipmr.net/index.php/ipmr/article/view/206>.

<sup>39</sup> Cornett, L., & A. Knowlton, N. (2020, June). Public Perspectives On Trust & Confidence In the Courts. *IAALS—Institute for the Advancement of the American Legal System*. [https://iaals.du.edu/sites/default/files/documents/public\\_perspectives\\_on\\_trust\\_and\\_confidence\\_in\\_the\\_courts.pdf](https://iaals.du.edu/sites/default/files/documents/public_perspectives_on_trust_and_confidence_in_the_courts.pdf); Federal Judicial Center. (2019). Maintaining the Public Trust Ethics for Federal Judicial Law Clerks. *Federal Judicial Center*. [https://www.fjc.gov/sites/default/files/materials/24/Maintaining\\_the\\_Public\\_Trust\\_Revised\\_4th\\_Edition\\_2019.pdf](https://www.fjc.gov/sites/default/files/materials/24/Maintaining_the_Public_Trust_Revised_4th_Edition_2019.pdf).

<sup>40</sup> Telang, A. (2023, March 14). The Promise and Peril of AI Legal Services to Equalize Justice. *Jolt Digest*. <https://jolt.law.harvard.edu/digest/the-promise-and-peril-of-ai-legal-services-to-equalize-justice>.

effective operation of legal and governmental systems.<sup>41</sup>

Another major barrier to legal certainty is due to technical failures is the inconsistency that arises when digital systems do not function as expected. For example, if an electronic system is attacked by a virus or a hacker experiences downtime,<sup>42</sup> the public might miss critical deadlines, resulting in the dismissal of certain events or legal penalties. These system failures can create confusion about legal rights and obligations, in particular no legal certainty provided by the government, especially when there is no clear contingency plan.<sup>43</sup> Even when backup procedures are available, the transition from digital to manual processes can cause inconsistencies in the treatment of cases, undermining the principle of legal certainty. Studies have shown that frequent technical issues in e-gov systems can lead to a decrease in user confidence, as people may not be certain that the system will function reliably when needed.<sup>44</sup> In addition to this, any disruption of the legal processes and technical failures also hinder the transparency that is crucial for building and maintaining public trust. E-gov systems are increasingly used to provide public access to laws, regulations, and public services. When these platforms go offline or experience technical glitches, it can create the perception that the government is not

competent or transparent in its operations. This lack of trust can be exacerbated if users suspect that technical failures are being used to obscure information or delay justice. Research on the impact of technological downtime in public institutions suggests that the more frequent and prolonged these outages, the greater the erosion of public trust, as citizens begin to feel that their legal rights and access to services are not being adequately protected.<sup>45</sup>

To address these barriers, robust technical infrastructure and reliable contingency plans are essential. Systems must be designed with redundancy and failover capabilities to ensure continuous operation, even in the face of technical difficulties. Furthermore, clear communication with the public is necessary during times of technical failure, providing transparency about the cause of the issues and the expected time for resolution. Legal frameworks should also account for such eventualities, allowing for extensions of deadlines or other accommodations when technical failures occur. According to legal scholars and the academic discourse, building public trust in digital systems requires not only technical robustness but also procedural safeguards that protect users

<sup>41</sup> B. Gracia, D., C. Ariño, L.V. (2015). Rebuilding Public Trust in Government Administrations Through E-government Actions. *Revista Española de Investigación de Marketing ESIC*, 19(1), 1-11. <https://doi.org/10.1016/j.reimke.2014.07.001>.

<sup>42</sup> Antoniuk, D. (2024, July 11). Macau Government Websites Hit with Cyberattack by Suspected Foreign Hackers. *The Record*. <https://therecord.media/macau-government-websites-hit-with-cyberattack>.

<sup>43</sup> Nadarajah, H., Iskandar, A., & T. San, S. (2024, June 15). Indonesian Government Under Fire Following String of Cyber Breaches. *Asia Foundation of Canada*. <https://www.asiapacific.ca/publication/indonesian-government-under-fire-after-cyber-breaches#:~:text=In%20Brief,immigration%20services%20and%20major%20airports>.

<sup>44</sup> Csatlós, E. (2024). Hungarian Administrative Processes in the Digital Age. *European Journal of Society and Politics*, 10(1). DOI:<https://doi.org/10.17356/ieejsp.v10i1.125>.

<sup>45</sup> M. Frank, R. (2012). The Public Trust Doctrine: Assessing Its Recent Past & Charting Its Future. *University of California, Davis*, 45(665). <https://www.law.gwu.edu/sites/g/files/zaxdzs5421/files/downloads/FrankThePublicTrustDoctrine.pdf>.

from the adverse consequences of system failures.<sup>46</sup>

### **Lack of Standardization and Lack of Inclusion Over Hungary's E-Government Services**

Hungary's lack of standardization across e-gov systems poses a significant barrier to the effective delivery and accessibility of digital public services. Standardization entails the uniform application of policies, technologies, and processes, ensuring that users across various regions and services have a consistent and reliable experience with government platforms. However, in Hungary, the absence of a unified e-gov framework has resulted in discrepancies in the implementation and usage of digital services across different governmental agencies and local municipalities. These inconsistencies not only confuse citizens but also hinder the broader adoption of e-gov initiatives. A critical issue stemming from this lack of standardization is the fragmentation of digital platforms among various regions and public institutions. Local governments, ministries, and public service bodies often develop and deploy their own digital systems, which may lack compatibility with one another. This fragmentation further complicates citizens' interactions with government services and diminishes the overall effectiveness of e-gov in Hungary. For example, in 2005 when Acts CSL of 2004 on the General Procedure and Service Regulations of Public Administration

Authorities (hereinafter Ket) defined two means to initiate electronic administrative matters.<sup>47</sup> The first method (the direct one) was the usage of high-security digital signatures while the second allowed clients to send their applications through the client access portal of the central electronic service provider system. When Ket. took effect, e-Administration received a separate article within the act with the details expanded in implementing regulations by the legislator. However, it soon became apparent that the regulations within Ket. Were only enough for the computerization of public proceedings; more than the framework would be needed to regulate the numerous services of the central system developed by the government. Therefore, the concept (and its regulations) have been expanded and eventually received separate legal regulations.

Without standardization, Hungary's e-government efforts risk leaving behind those most vulnerable to digital exclusion. Thus, a concerted push towards creating unified easily navigable digital platforms would be a crucial step in ensuring that the benefits of e-gov are felt equally across society, fostering greater inclusion and trust in the digital transformation of public services.<sup>48</sup> Moreover, public trust in e-government is also affected by issues of digital inclusion. Citizens who do not have reliable internet access or who lack the necessary digital literacy skills may feel excluded from government services. This digital divide can lead to a lack of trust in e-gov, as citizens who are unable to access these services

<sup>46</sup> Díaz-Rodríguez, N., Del Ser, J., Coeckelbergh, M., López de Prado, M., Herrera-Viedma, E., & Herrera, F. (2023). Connecting the dots in trustworthy Artificial Intelligence: From AI Principles, Ethics, and Key Requirements to Responsible AI Systems and Regulation. *Information Fusion*, 99. <https://doi.org/10.1016/j.inffus.2023.101896>.

<sup>47</sup> Act CL of 2016 on the Code of General Administrative Procedure (2016). <https://njt.hu/jogszabaly/en/2016-150-00-00>.

<sup>48</sup> Veszprémi, B. (2017). The Status of e-Administration in Hungary – Are We on the Right Track?. *Public Governance, Administration and Finances Law Review*, 2(2), 42–59. <https://doi.org/10.53116/pgafmr.2017.2.3>.

perceive the system as unfair or inaccessible.<sup>49</sup> Inequality in digital access poses a significant challenge to the successful implementation of e-government services in Hungary. While the country has made notable progress in digitizing its public services, a divide persists between those who can easily access and utilize these platforms and those who cannot. This digital divide is influenced by factors such as income, geographic location, and age. According to Eurostat, in 2020, approximately 88% of Hungarian households had internet access,<sup>50</sup> however, this figure conceals substantial inequalities. Rural areas, lower-income groups, and elderly citizens are disproportionately affected by unreliable internet access and limited digital skills, hindering their ability to fully benefit from Hungary's e-gov initiatives.<sup>51</sup>

Geographically, the digital divide in Hungary is stark, with urban areas enjoying significantly better access to e-gov services than rural regions, and that highlights the legal certainty and public trust towards the Hungarian government. In cities such as Budapest, where internet infrastructure is robust and digital literacy programs are more accessible, the uptake of e-government

services is relatively high. However, rural areas often need more high-speed broadband, making it easier for residents to connect to government platforms. According to Hungary's National Digitalization Strategy, rural and economically disadvantaged regions face more significant barriers to accessing digital infrastructure, which restricts their ability to participate in e-government services and further deepens the gap in access to public resources.<sup>52</sup> Moreover, digital literacy is a critical issue in Hungary, particularly among older populations. While younger generations are more digitally adept and comfortable using online services, older individuals often need more skills to navigate e-gov platforms.<sup>53</sup> A Hungarian Central Statistical Office report found that only 32% of people over 55 had basic digital skills, compared to 79% of individuals aged 16-24.<sup>54</sup> This gap in digital competence means that many older citizens continue to rely on paper-based government services, limiting the overall effectiveness and reach of Hungary's e-government efforts to restore public trust. To address these disparities, the Hungarian government must improve digital infrastructure in rural areas and promote digital literacy programs across all age

<sup>49</sup> Çelik, N. (2023). The Digital Inequalities in The Digital Society. *Bilgin Kültür Sanat Yayınları*, 75-81. [https://www.researchgate.net/publication/376174034\\_The\\_Digital\\_Inequalities\\_in\\_The\\_Digital\\_Society](https://www.researchgate.net/publication/376174034_The_Digital_Inequalities_in_The_Digital_Society).

<sup>50</sup> Trading Economics. (2024, November). Hungary - Individuals Using Mobile Devices to Access the Internet on the Move: Individuals, 55 to 74 Years Old. *Trading Economics*. <https://tradingeconomics.com/hungary/individuals-using-mobile-devices-to-access-the-internet-on-the-move-individuals-55-to-74-years-old-eurostat-data.html>.

<sup>51</sup> Trading Economics. (2024, November). Hungary - Households Without Access to Internet at Home, Because of Privacy or Security Concerns. *Trading Economics*. <https://tradingeconomics.com/hungary/households-without-access-to-internet-at-home-because-of-privacy-or-security-concerns-eurostat-data.html>.

<sup>52</sup> Cabinet Office of the Prime Minister. (2022). Hungary National Digitalization Strategy 2022 - 2030. *Cabinet Office of the Prime Minister*. <https://www.digitaliskeszsegek.hu/wp-content/uploads/2024/08/National-Digitalisation-Strategy.docx.pdf>.

<sup>53</sup> Global Digital Impact. (2023). Digital Literacy: The Great Divide. *United Nations*. [https://www.un.org/techenvoy/sites/www.un.org.technvov/files/GDC-submission\\_Digital-National-Alliance-Bulgaria\\_0.pdf](https://www.un.org/techenvoy/sites/www.un.org.technvov/files/GDC-submission_Digital-National-Alliance-Bulgaria_0.pdf).

<sup>54</sup> Krasavina, A. (2024, August 1). Hungary - National Digital Decade Strategic Roadmap. *European Union Digital Skills and Jobs Platform*. <https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/hungary-national-digital-decade-strategic-roadmap>.

groups to ensure equitable access to e-government services.

### Conclusion and Recommendations

Legal certainty is a crucial component for the successful implementation of e-government systems. In Hungary, however, the current legal framework for e-government has struggled to keep pace with technological advancements, leading to confusion among citizens and businesses. Legal uncertainty has arisen due to outdated regulations, inadequate public consultation in regulatory changes, and fragmented approaches to legal reform. This environment fosters mistrust in e-government systems, as citizens feel they need to be more confident about their rights and obligations, particularly in areas like data protection, digital contracts, and public procurement. Moreover, legal gaps and ambiguities make the system susceptible to exploitation, risking fairness and accountability. Hungary's e-government framework must prioritize legal certainty to improve trust and adoption, making laws clear, consistent, and adaptable to technological change.

Trust is essential in public administration, especially in e-government, where relationships are mediated through digital platforms that citizens may already view with some skepticism. In Hungary, public trust in government services, especially digital ones, has declined. Factors like political controversies, economic difficulties, and inconsistent governmental performance have all contributed to this erosion of trust. Additionally, limited transparency and a lack of meaningful public consultation when creating or changing e-government services have further alienated citizens, who feel excluded from decisions that affect their access to essential public services. With's e-government initiatives

may only achieve widespread acceptance with concerted efforts to enhance this trust.

Technical failures are a critical issue in e-government, as frequent outages and system downtimes can profoundly impact trust and legal certainty. In Hungary, unreliable digital platforms create uncertainty, especially for users who depend on these services to meet legal deadlines or fulfill civic obligations. When e-government systems fail, citizens may face delays and confusion about the status of their cases or the reliability of their digital submissions. This inconsistency erodes confidence in the digital systems, creating an environment where citizens feel unsure about their rights and obligations, weakening the legal certainty essential for effective governance. Robust technical infrastructure and precise, effective contingency plans are necessary to maintain user trust and ensure consistent service delivery.

Hungary's e-government initiatives are currently hindered by a lack of standardization, which has led to a disjointed experience across different regions and public agencies. This lack of cohesion creates confusion and hinders accessibility, as citizens face inconsistent processes and requirements depending on which government body they interact with. Without a standardized e-government framework, Hungary risks creating a fragmented system where users struggle to navigate public services. Standardization could provide users with a uniform, seamless experience, fostering stability and predictability in e-government interactions. A unified approach would also increase the operational efficiency of public agencies, facilitating smoother interagency communication and enabling a more integrated digital public service landscape.

The digital divide remains a considerable barrier to the success of Hungary's e-government services, limiting



the accessibility and inclusivity of these platforms. In Hungary, internet access and digital literacy disparities are especially pronounced among rural and elderly populations, who often struggle to engage fully with e-government services. This exclusionary effect undermines the principle of equal access to public services, leaving vulnerable groups alienated and fostering a perception that digital government is

inaccessible or unfair. Hungary must prioritize expanding internet infrastructure in underserved areas to address these challenges and invest in digital literacy programs. Bridging this digital divide is essential not only for maximizing the reach and effectiveness of e-government but also for fostering a more inclusive and trustworthy digital government environment that meets the needs of all citizens.

## References

### Books and journal articles

- P.Nicolaides, N.Preziosi, *Discretion and Accountability: An Economic Analysis of the ESMA Judgment and the Meroni Doctrine*. Intereconomic 49, 2014.
- Z.Al-Adawi, S.Yousafzai, J. Pallister, Conceptual Model of Citizen Adoption of E-Government at *The Second International Conference on Innovations in Information Technology (IIT)*, 2005.
- J.Anderson, J.A. Narus, *A Model of Distribution Firm and Manufacturer Firm Working Partnerships*, in “Journal of Marketing” 54 (1), 1990.
- D. Antoniuk, *Macau Government Websites Hit with Cyberattack by Suspected Foreign Hackers* in “The Record”, 2024.
- D.Arduini, A. Zanfei, *An Overview of Scholarly Research on Public E-Services? A Meta-analysis of the Literature*. Telecommunications Policy, 2014.
- B. Gracia, D., C. Ariño, L.V., *Rebuilding Public Trust in Government Administrations Through E-government Actions* in “Revista Española de Investigación de Marketing ESIC, 19(1)”, 2015.
- F.Bannister, R. Connolly, *Trust and Transformational Government: A Proposed Framework for Research*. *Government Information Quarterly*, 28(2), 2011.
- Corporate Excellence, *Cae la confianza en empresas e instituciones y sube en expertos e iguales*. *Documentos de Estrategia*, 116/2012, 2012.
- F.Bélanger, L.Carter, *Trust and Risk in E-Government Adoption*, in “Journal of Strategic Information Systems, 17 (2)”, 2008.
- D.Belanche, L. V.Casaló, M. Guinalú, *How to Make Online Public Services Trustworthy in “Electronic Government: An International Journal, 9(3)”, 2012.*
- A.Beldad, T.Van Der Geest, M.de Jong, M.Steehouder, *A Cue or Two and I'll Trust You: Determinants of Trust in Government Organizations in Terms of their Processing and Usage of Citizens' Personal Information Disclosed Online*, in “Government Information Quarterly”, 2012.
- C. Wood, Mary, *Advancing The Sovereign Trust of Government to Safeguard The Environment for Present and Future Generations: Instilling A Fiduciary Obligation in Governance*, in “Lewis & Clark Law School ENVTL L. 39(91)”, 2009.
- C. Wood Mary, *Advancing The Sovereign Trust of Government to Safeguard The Environment for Present and Future Generations (Part II): Instilling A Fiduciary Obligation in Governance*, in “Lewis & Clark Law School ENVTL L. 39(91)”, 2009.
- N. Çelik, *The Digital Inequalities in The Digital Society*, Bilgin Kültür Sanat Yayınları, 2023.
- L. Cornett, & N. A. Knowlton, *Public Perspectives On Trust & Confidence In the Courts*, in “IAALS—Institute for the Advancement of the American Legal System.”, 2020.

- P. Craig, *Administrative Law*, Sweet & Maxwell, 2021.
- E. Csatlós, *Hungarian Administrative Processes in the Digital Age*, in “*European Journal of Society and Politics*, 10 (1).” 2024.
- N. Díaz-Rodríguez, J. Del Ser, M. Coeckelbergh, M. López de Prado, E. Herrera-Viedma, F. Herrera, *Connecting the dots in trustworthy Artificial Intelligence: From AI Principles, Ethics, and Key Requirements to Responsible AI Systems and Regulation*. *Information Fusion*, 2023.
- Ipsos Hungary Zrt., *Public Opinion in Hungary*, Center for Insights in Survey Research, 2017.
- L.R. Jones, D. F. Kettl, *Assessing Public Management Reform in an International Context*, in “*International Public Management Review*, 4(1)”, 2014.
- D. Kaufmann, A. Kraay, M. Mastruzzi, *Governance Matters 2009: Learning From Over a Decade of the Worldwide Governance Indicators*, in “*Brookings*”, 2009.
- S. Kemp, *Digital 2024: Hungary*, in “*DataReportal*”, 2024.
- M. Kordela, *The Principle of Legal Certainty As A Fundamental Element of The Formal Concept of The Rule of Law*, in “*Revue du notariat*”, 110(2), 2008.
- R.M. Frank, *The Public Trust Doctrine: Assessing Its Recent Past & Charting Its Future*, in “*University of California*”, Davis, 45(665), 2012.
- James R. Maxeiner, *Some Realism About Legal Certainty in the Globalization of the Rule of Law*, in “*Houston Journal of International Law*”, 31(1), 2008.
- P. Delimatsis, *International Trade in Services and Domestic Regulations - Necessity, Transparency, and Regulatory Diversity*, Oxford University Press, 2007.
- R.Mayer, J.Davis, F. Schoorman, *An Integrative Model of Organizational Trust*, in “*Academy of Management Review*”, 20(3), 1995.
- R. Morgan, S. Hunt, *The Commitment-Trust Theory of Relationship Marketing*, in “*Journal of Marketing*”, 1994.
- P. Doney, J.Cannon, *An Examination of the Nature of Trust in Buyer-Seller Relationships*, in “*Journal of Marketing*”, 1997.
- H. Nadarajah, A. Iskandar, T. San, *Indonesian Government Under Fire Following String of Cyber Breaches*, Asia Foundation of Canada, 2024.
- R. Pérez-Morote, C. Pontones-Rosa, M. Núñez-Chicharro, *The Effects of E-Government Evaluation, Trust and the Digital Divide in the Adoption of E-Government Services in Europe*. *Technological Forecasting and Social Change*, 2020.
- P. Pillay, *Public Trust and Good Governance A Comparative Study of Brazil and South Africa*, in “*African Journal of Public Affairs*”, 2017.
- C. Solomon, *The Newest Legal Tool to Fight Climate Change is as Old Ancient Rome*. *Outside.*, 2016.
- H. Sun, *Toward A New Social-Political Theory of The Public Trust Doctrine*. “*Vermont Law Review*”, 2011.
- S. Taekema, *The Procedural Rule of Law: Examining Waldron’s Argument on Dignity and Agency*, in “*Annual Review of Law and Ethics*”, 2013.
- S. Berteau, *Towards a New Paradigm of Legal Certainty*, in “*Legisprudence*”, 2008.
- B.Z., Tamanaha, *The History and Elements of the Rule of Law*, in “*Singapore Journal of Legal Studies* 12” , 2012.
- J. Raz, *The Authority of Law: Essays on Law and Morality*, in Oxford: Clarendon Press, 1979.
- D. Tapscott, A. Tapscott, *Blockchain Revolution: How the Technology Behind Bitcoin is Changing Money, Business, and the World*, Penguin, 2016.
- A. Telang, *The Promise and Peril of AI Legal Services to Equalize Justice*, at “*Jolt Digest*”, 2023.

- Trading Economics, Hungary - *Households Without Access to Internet at Home, Because of Privacy or Security Concerns.*, at “Trading Economics”, 2024.
- M. Jávör, Dénes., M.Ligeti, J. P. Martin, J. Zeisler, *Hungary is the most corrupt Member State of the European Union*, at “Transparency International”, 2023.
- L. van Apeldoorn, *Hobbes on Property: Between Legal Certainty and Sovereign Discretion*, in “Hobbes Studies”, 34(1), 2021.
- B. Veszprémi, *The Status of e-Administration in Hungary – Are We on the Right Track?*, in “Public Governance, Administration and Finances Law Review”, 2(2), 2017.
- P. Voigt, A. Von dem Bussche, *The EU General Data Protection Regulation (GDPR): A Practical Guide*, in “Springer International Publishing”, 2017.
- Carmen R. Apaza, *The Importance of Bureaucratic Oversight Mechanisms: The Case of the Inspector General*. “Journal of the Washington Institute of China Studies”, 2008.
- M. Weber, *Economy and Society: An Outline of Interpretive Sociology*, “University of California Press”, 1978.
- J. Webster, R. T. Watson, *Analyzing the Past to Prepare for the Future: Writing a Literature Review*. “MIS Quarterly”, 2002.
- A. Krasavina, *Hungary - National Digital Decade Strategic Roadmap*, at “European Union Digital Skills and Jobs Platform”, 2024.

#### On-line resources

- <https://www.law.cornell.edu/uscode/text/5/70>;
- <https://njt.hu/jogszabaly/en/2016-150-00-00>.
- <https://therecord.media/macau-government-websites-hit-with-cyberattack>.
- <https://doi.org/10.1016/j.reimke.2014.07.001>.
- <https://www.digitaliskeszsegek.hu/wp-content/uploads/2024/08/National-Digitalisation-Strategy.docx.pdf>.
- [https://www.researchgate.net/publication/376174034\\_The\\_Digital\\_Inequalities\\_in\\_The\\_Digital\\_Society](https://www.researchgate.net/publication/376174034_The_Digital_Inequalities_in_The_Digital_Society).
- <https://civicspacewatch.eu/hungary-draft-defence-of-sovereignty-bill-concerning-for-csos-and-journalists/>;
- [https://iaals.du.edu/sites/default/files/documents/publications/public\\_perspectives\\_on\\_trust\\_and\\_confidence\\_in\\_the\\_courts.pdf](https://iaals.du.edu/sites/default/files/documents/publications/public_perspectives_on_trust_and_confidence_in_the_courts.pdf);
- [https://www.fjc.gov/sites/default/files/materials/24/Maintaining\\_the\\_Public\\_Trust\\_Revised\\_4th\\_Edition\\_2019.pdf](https://www.fjc.gov/sites/default/files/materials/24/Maintaining_the_Public_Trust_Revised_4th_Edition_2019.pdf).
- <https://www.coe.int/en/web/greco/-/hungary-publication-of-5th-round-evaluation-report-and-4th-interim-compliance-report-of-4th-round>
- <https://doi.org/10.17356/ieejsp.v10i1.125>.
- <https://doi.org/10.1016/j.inffus.2023.101896>.
- <https://rm.coe.int/fifth-evaluation-round-preventing-corruption-and-promoting-integrity-i/1680ab87f5>.
- [https://www.iri.org/wp-content/uploads/2018/04/hungary\\_poll\\_presentation.pdf](https://www.iri.org/wp-content/uploads/2018/04/hungary_poll_presentation.pdf).
- <https://ipmr.net/index.php/ipmr/article/view/206>.
- <https://www.brookings.edu/articles/governance-matters-2009-learning-from-over-a-decade-of-the-worldwide-governance-indicators/>.
- <https://datareportal.com/reports/digital-2024-hungary>.
- <Http://doi.org/10.7202/104553ar>.

- <https://www.law.gwu.edu/sites/g/files/zaxdzs5421/files/downloads/FrankThePublicTrustDoctrine.pdf>.
- <https://www.law.gwu.edu/sites/g/files/zaxdzs5421/files/downloads/FrankThePublicTrustDoctrine.pdf>.
- <https://ssrn.com/abstract=1471563>;
- <https://ssrn.com/abstract=1471563>.
- <https://www.asiapacific.ca/publication/indonesian-government-under-fire-after-cyber-breaches#:~:text=In%20Brief,immigration%20services%20and%20major%20airports.>
- <https://www.outsideonline.com/2083441/newest-legal-tool-fight-climate-change-old-ancient-rome>.
- <https://www.outsideonline.com/2083441/newest-legal-tool-fight-climate-change-old-ancient-rome>.
- <https://jolt.law.harvard.edu/digest/the-promise-and-peril-of-ai-legal-services-to-equalize-justice>.
- <https://tradingeconomics.com/hungary/households-without-access-to-internet-at-home-because-of-privacy-or-security-concerns-eurostat-data.html>.
- <https://www.transparency.org/en/countries/hungary>;
- [https://transparency.hu/wp-content/uploads/2023/02/TI\\_Hu\\_CPI\\_2022\\_report\\_-en.pdf](https://transparency.hu/wp-content/uploads/2023/02/TI_Hu_CPI_2022_report_-en.pdf).
- <https://doi.org/10.1163/18750257-bja10024>.
- <https://doi.org/10.53116/pgafllr.2017.2.3>.
- <https://eucrim.eu/news/hungary-rule-of-law-developments-may-2023-mid-january-2024/>;
- [https://www.un.org/techenvoy/sites/www.un.org.techenvoy/files/GDC-submission\\_Digital-National-Alliance-Bulgaria\\_0.pdf](https://www.un.org/techenvoy/sites/www.un.org.techenvoy/files/GDC-submission_Digital-National-Alliance-Bulgaria_0.pdf).
- <https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/hungary-national-digital-decade-strategic-roadmap>