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Preliminary Considerations on Artificial Intelligence and Democratic Cyber Safety for the Protection of Children

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Abstract: Pervasive computing has abused information and communication technologies and created new kinds of systemic risks and societal vulnerabilities. With the rise of artificial intelligence, deep learning, machine learning, and pattern recognition systems, all those petabytes of information can be analysed and used to seriously interfere with the rights and liberties of others, and, in particular, it can be used to reveal the most intimate aspects of the lives of others. This, in turn, has offered new and unheard means of criminality, ranging from financial offenses to child exploitation. Therefore, there is a social responsibility for developing systems capable of mitigating the risks that the development of information and communications technologies poses to society. Given that this particular threat involves expression, efforts to mitigate expression-related misconduct must attend to rules that protect expression from government regulation. This article considers one particular area of expression-related misconduct, namely the online abuse of children.

Keywords: safety, security, AI, child protection, free speech

1. Introduction

Information and computing technologies have become pervasive in our world. Cloud, fog, and edge computing expanded by social media and the Internet of Things collect immense amounts of data in every widespread corner of the information world. Machine learning, deep learning, and “artificial intelligence” provide powerful means to search, analyse, and recognise knowledge and meaning in that immense data corpus. Effectively, almost nothing is hidden, and there is almost nothing that is not discoverable and accessible. Unfortunately, that is matched by increasing power to breach the security of information in many ways and many forms. As such, due to the pervasiveness of this encroachment, the home is no longer a sanctuary. And due to its power of manipulation,

fabrication, and analysis, privacy in the physical world is greatly diminished. But a compromise to privacy inevitably brings along a compromise to the protections it offers as well.

Probably the most grievous interference with the right to privacy is related to the expanding phenomenon of “deepfake” technology having immense societal impact through its mass communication of false, humiliating, and manufactured images and footage. Modern information and communications technologies offer a broad ability to disseminate such content practically anywhere and to anyone, harshly interfering with personal autonomy and privacy. What is more, the consumerisation of advanced AI technologies, such as deep learning, pattern recognition, and machine learning, provides the means of information manipulation on a vast scale, capable of encroaching on the right to the freedom of thought, the freedom of expression, and personal safety *en masse*. One example of such criminality is the implementation of AI systems to automate and empower the coercion and exploitation of children for perverse purposes.

That AI systems present such great risks to children gives computer scientists and engineers developing and deploying these systems a choice. They can simply focus on the details of the technical system and leave issues relating to societal impact for others to address. Or they can embrace a moral and ethical position to engineer such exploitation out of their systems, or at least to minimise the risks of exploitation, and provide opportunities for the use of traditional public safety mechanisms to deter wrongdoers, and stop their criminality. We consider this in the context of the online sexual exploitation of children, a global problem for every nation.

2. Protecting children in the cyberspace

2.1. The technical requirements for public safety

The regulation and control of information and communications technologies and AI systems are concerns globally, particularly with the rise of generative pretrained transformers and large language models (LLM). Nations seek to control these amazing systems while not strangling the benefits they produce nor the innovation required to expand their abilities. The European Union is a leader in regulation of these technologies through the comprehensive EU AI Act¹ and its General Data Protection Regulation (GDPR).² The People’s Republic of China also leads in this process of regulation, including with its Interim Measures for the Management of Generative Artificial Intelligence.³ But regulation is just a first step in creating a regime of public safety. There

¹ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act), OJ L 2024/168.

² Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of Natural Persons with Regard to the Processing of Personal Data and on the Free Movement of such Data, and Repealing Directive 95/46/EC.

³ Interim Measures for the Management of Generative Artificial Intelligence Services, (effective 15 August 2023) of the Peoples’ Republic of China.

must be a process by which the regulations can be enforced, and wrongful conduct investigated, terminated, and punished. This requires the integration of the legal regime with the technical regime to provide for public safety and security in cyberspace. This is especially important as the information and communications technologies regime deals with *information*, with speech and expression for various purposes. Its significance consists in being related to one of the most important of fundamental rights, as the freedom of expression is believed to be “essential to secure all others” (O’Connell, 2020, p. 87). Speech and expression receive, thus, extensive protection from those nations seeking to uphold the very fundamentals of human rights and dignity. The challenge is how to harvest the innovations cyberspace is offering while maintaining the protection of that very speech and expression and constraining possible illegal conduct through the use of that information.

A rather special area where the protection of these freedoms is paramount is the information related to children. The protection of children is an important issue for families, communities, and the state, if not one of the most important of all social issues. The law of the U.S., one of the most solicitous of free expression anywhere, permits regulation generally where there is a *compelling* need to do so, and an effective means for such regulation. See e.g. *Reed v. Town of Gilbert, Arizona*.⁴ See also *Ashcroft, Attorney General v. ACLU et al.*,⁵ *Boos v. Barry*.⁶ Through its judicial case law, it has found there is a compelling legal protectable state interest in protecting children. That interest is deemed legally *compelling*, sufficient to justify state intervention where such intervention can be effective. Among the worst injuries from information technology are those that facilitate and promote child sexual abuse. Among the greatest challenges in law are devising effective and legal systems to regulate the use of information technologies capable of harming children.

2.2. Technical facts and legal regulation

Regulatory tests of limits on free expression under the U.S. standard of “strict scrutiny” are not purely legal. The identification of a compelling state interest in such limits requires an analysis of the technical practicality of protecting that interest through limitations on expression. They require an examination of the facts of the means by which information is distributed to people and the impact on those people, culminating in three issues in particular.

First, the phenomenon of internet connectivity has grown as to become a technology of central significance as noted in *ACLU v. Reno*, that U.S. Supreme Court case observed that the ability of people to connect to all the information in the world has great benefits. The Court further observed that regulation of such means of information distribution must weigh its benefits against possible detriments and the means by which the detriments might be mitigated.

⁴ *Reed v. Town of Gilbert*, 576 US 155 (2015).

⁵ *Ashcroft, Attorney General v. American Civil Liberties Union et al.*, 535 US 564 (2002).

⁶ *Boos v. Barry*, 485 U.S. 312 (1988).

The second problem is posed by the Internet of Things phenomenon and ubiquitous data where the data corpus of all information collected on everyone, everything they do, and everywhere they are continues to grow. This growth is exponential. Furthermore, the expansion and distribution of nearly ubiquitous data sensing systems and data distribution and collection technologies, such as cloud computing, continue. This means that nothing is lost and nothing is forgotten, which is a legally significant problem in itself. The European Union, to address this issue of eternal memory, provide for a “right to be forgotten”, formally a right of erasure of data, as part of their regulation of data systems.⁷

Finally, AI technologies are prone to algorithmic biases, manifesting themselves either in profiling or dishing out content. This is particularly relevant with a view to child protection as AI systems are capable of doing probabilistic analysis on a particular subject and providing effective responses relevant to that subject and their interests in an unprecedented way. The generative pre-trained transformer architectures for content analytics by AI systems can produce remarkably accurate and directed information that can be framed to appeal to a particular person. And it is this very technology and its scope and scale of focus on an individual, their interests and their desires, that may as a factual matter change the balance regarding whether or not there is a compelling need to regulate such information dissemination systems in a variety of areas.

From this brief overview, it follows that AI technologies are very potent tools capable of harmfully interfering with the protection of children. Their power has already been demonstrated through risks presented across other domains of human activity, such as the AI-driven recommender systems, used widely in commerce and marketing. These are risks that must be recognised and mitigated for child protection.

3. Protecting children and free expression in the new cyber world

3.1. Foundations for technical engagement

The vast reach of the Internet, especially via social media systems, guarantees that users of those systems are “virtually” placed “next” to children, as to enable their exploitation (Wachs et al., 2012). A connection to a child opens the way for the information seduction and exploitation of that child.

The information seduction and exploitation process has been described as “grooming” to prepare a child for what the abuser wishes next. Standard patterns for such grooming have been found, although clear patterns of psychometrics have not yet been established (Bennett & O’Donohue, 2014; see Pollack & MacIver, 2015). The elements and processes of such exploitation are gaining further definition as to permit information analysis. A frequent if not standard practice and protocol has the abuser “gaining access to a child, gaining the child’s compliance, maintaining secrecy and avoiding disclosure” (Craven et al., 2006). The practices of grooming behaviours have been collected,

⁷ GDPR Regulation (EU) 2016/679, Article 17.

categorised, ordered, and then applied to observe the responses (Winters & Jeglic, 2017). Their analysis produces a structured sequence of grooming behaviours that escalate the process of abuse.

First, there is a selection of the target child. The target exhibits a lack of confidence, low self-esteem and insecurity; the target is in a family with issues of discord, domestic violence, substance abuse, health concerns; there is a perceived ease of access, or the child is vulnerable in some way, such as under low levels of adult engagement and supervision; the target is attractive or appealing to the perpetrator. Next, there must be a connection and access to the target child, that is inevitably followed by isolation of the target child in various ways, physically and psychologically. Third, there is a process of trust creation with the target child, in which trust is being created in their relationship through inquiries as to the target child's interests, encouragement, aid, and offering gifts and secrets to the target child. Finally, at the end stage, there follow activities that lead to physical contact between the target child and the perpetrator.

The successful investigation and prosecution of such cases involving child sexual abuse is supported by understanding these behaviours and seeking evidence of them (Pollack & MacIver, 2015); hence, technical engagement and legal action are intrinsically interdependent. With the definition and listing of such behaviours, with associated text discussions, imagery, and audio, a structure for "grooming" can be built. Black et al. (2015) noted that the linguistic processes for online grooming behaviour were similar to offline behaviour and shared common language patterns, albeit in a different order from that in offline activity. Their analysis highlighted the frequency distribution for words/actions, with flattery, parental presence at work, travel, and "inappropriate behaviour". This linguistic analysis could easily be ported to the training of an analytical language model to engage broadly with targets. Advanced LLMs, like ChatGPT, and specialised small language models (SLMs) can pose and respond to text questions and statements through natural language. This capability offers the potential for efficient and broadly available systems for the detection of misconduct.

Such LLMs can be trained against large sets of data to build their probabilistic model of responses. Similarly, SLMs can be trained against specialised sets of data to create similar models of possible misconduct. These may be found in social media systems generally, as well as those dealing with making social connections, including those on the Dark Web. Lorenzo-Dus et al. (2020) have detailed their lexical and collocation analysis of online grooming transcripts that shows recurring patterns and linguistic structures in grooming language. They suggest the need to develop powerful algorithms to drive detection software of such behaviours, as well as hone the understanding of the *modus operandi* of the offenders.

Unfortunately, such developments may also support the development of "grooming" systems that automate the exploitation process. The semi-supervised and unsupervised training of LLMs and SLMs for child sexual exploitation may be matched by fully supervised and programmed models based on the patterns found in grooming behaviours. The use of SLMs may build effective systems in the child protection domain, given the specialised knowledge, expertise, and language of the target offenders (O'Keeffe & McWhirter, 2023). The use of SLMs for child protection benefits from the psychological

and forensic work addressing online child sexual exploitation. This may permit balancing of performance and ability through design and data choices and lead to more rapid systems of response and protection (Kramer, 2024).

The danger of such automated systems is that those machines working night and day in a globally connected world can advance these evils. They may evolve to detect law enforcement stings and AI detection models to avoid their own detection and alerts by protective measures in place on host systems, such as social media, as well as deliver precisely the illegal grooming behaviour sought to be stopped.

3.2. Models for online child protection

Online child protection in the United States has focused first on promoting safe online practices for children, usually under parental oversight (United States Federal Trade Commission, s. a.; Federal Bureau of Investigation, 2025). For traditional models of law enforcement “patrolling” and “stings” in online areas of risk for misconduct are used (Fowler et al., 2020). These entail law enforcement personnel monitoring online sites, such as social media, that may have child predators using those sites to find targets (Kyrik, 2005). With the advent of AI systems comes the opportunity to automate the process of searching online for child predatory actors. In particular, Language Models have potential for more efficient, cost-effective and timely systems for the online patrol for predators.

The existing data permits a start at building a language model to detect word patterns for “grooming” behaviour as part of the seduction of a target child. Studies show linguistic processes for online grooming behaviour were similar to offline behaviour and shared common language patterns; the primary deviation between the behaviours is that there is a different order of behaviours between online and offline misconduct (Black et al., 2015; Plaisance, 2024). These studies enable the development of preventive measures, making use of hand-coded, supervised, semi-supervised, and unsupervised training of LLMs to accomplish the online protection of children. As such, the Office of the District Attorney for the Parish of Orleans, Louisiana, for instance, has implemented an open-source use of AI systems to track criminal activity (O’Keeffe & McWhirter, 2023). The state Attorney General’s office seeks to expand that statewide (Kramer, 2024). This is paralleled by a project helmed by Tulane University researchers to use AI to evaluate the criminal justice system itself (Plaisance, 2024).

Another approach would be the use of SLMs directed at the more limited and stylised practices and language used in child exploitation (Sartain, 2024). The use of SLM systems in the stylised space of online child sexual exploitation might be used for reasoning models that can develop predictive and protective systems against more limited data in a particular jurisdiction with more confined sets of misconduct (Fu et al., 2023).

Studying, creating, and understanding such systems will, unfortunately, be necessary to combat the criminal use of LLM or SLM “grooming” to build relentless means of child exploitation. Working night and day in a globally connected world eases and expands these types of abuse. They can serve to locate and alert on adversarial AI detection models.

They may support investigations into misconduct despite efforts to bypass protective systems that may be deployed, such as content screening for misconduct by large social media services. The U.S. social media service Meta Facebook uses such automated tools to search for malicious material, such as images of child sexual exploitation (Petroff, 2018). This model expands detection to text and voice patterns related to improper conduct with children. The development and use of generative adversarial networks to circumvent image manipulation detection shows how quickly offenders will act to neutralise the effectiveness of protective systems (Mavali et al., 2024). The compelling interest in protecting children may require further regulatory/technical support to build effective protections.⁸

3.3. Expanded boundaries of responsibility

Public safety is not simply a task of state officers. It is a much broader social enterprise for protection generally and for the protection of children specifically. The provision of protection, such as capable guardians watching for threats, embraces more than legal authorities, such as the police. It includes friends, good citizens, neighbours, and parents whose moral suasion alone may help deter misconduct. Such guardians may support the recovery from misconduct and assist legal authorities in the prosecution of those committing misconduct. For online activity, capable guardians must include the online services themselves.

Online services in the U.S. have been shielded from responsibility for the actions of their users; the U.S. Communications Decency Act Section 230 gave immunity from liability for the actions of others using their systems.⁹ Yet that immunity has been limited or removed by legislative action in relation to particular types of content, including child sexual exploitation via these systems pursuant to the FOSTA-SESTA amendments to Section 230, addressing that and other illegal exploitation (National Institute of Justice, 2024).¹⁰ Those amendments were the first to begin to limit the safe-harbour immunities for online service providers where those systems were used to promote sex trafficking.

Furthermore, the expansion of services by online services may have also moved them out from under the liability shield of Section 230 immunity. Those expanded services move from passive tender of third-party originated content to actions by the online service provider itself. Those activities and liability for the injuries caused may fall outside of the Section 230 immunity. The hallmark online services include algorithmic systems that keep and heighten the users' engagement in the system by directing the users to particular content, especially through recommender systems. Arguably, these systems may have the

⁸ *Osborne v. Ohio* 495 U.S. 103, 111, 109 L. Ed. 2d 98, 110 S. Ct. 1691 (1990).

⁹ 47 U.S.C. Section 230, part of the Communications Decency Act of 1996 providing a safe harbour immunity to providers of an "interactive computer service" that may republish content from third parties; see *Gonzalez v. Google LLC* 598 U.S. 617 (2023); *Twitter v. Taamneh* 598 U.S. 471 (2023).

¹⁰ FOSTA-SESTA Acts: The Allow States and Victims to Fight Online Sex Trafficking Act (FOSTA) and the Stop Enabling Sex Traffickers Act (SESTA). There is some questioning of the effectiveness of the FOSTA-SESTA Acts and indicating negative impacts from this legislation.

capacity to block such content from a particular user group, especially populations susceptible to exploitation, like children, the elderly, or those with cognitive dysfunction. The lack of intentionality by the algorithmic system does not change the injury caused by its conduct. The deaths of innocent people were the focus of the litigation in *Taamneh*¹¹ and *Gonzales*,¹² but the lack of a clear causal connection to the actions of the online services meant liability could not be established.

However, the federal appellate court was persuaded that such an online service's causal and liability connection existed in *Anderson v. TikTok*.¹³ The U.S. Court of Appeals for the Third Circuit reversed a district court's dismissal pursuant to Section 230 immunity, and remanded the case back for trial on the issues of liability for the death of a child using the systems. The District Court dismissed the case pursuant to the immunity of Section 230 of the Communications Decency Act for Internet interactive computer services from suit due to "information provided by another information content provider".¹⁴ The Court of Appeals rejected the district court's reasoning by finding that Section 230 did *not* immunise from suit interactive computer services "if they are sued for their own expressive activity or content (i.e. first-party speech)". In doing so, the appellate court cited the 2024 U.S. Supreme Court's ruling in *Moody v. NetChoice LLC*¹⁵ that curation of third-party content to present via algorithm by an interactive computer service is the "expressive product" of the online service itself, subject to First Amendment protection.¹⁶ The *Moody* Court noted that a platform's standards or preferences, encoded in the algorithm's choices, might determine whether or not the algorithmic output, such as recommended content, was itself expressive content, and not simply third-party speech passed on to others with no expressive action by the interactive computer service.

In the *Anderson* case, the ten-year old child's asphyxiation death followed her participation in the "Blackout Challenge" asphyxiation activity she learned of from a video directed to the child Nylah's "For You Page" by TikTok's algorithmic recommender system. That video detailed the Blackout Challenge, which "encourages users to choke themselves with belts, purse string, or any similar until passing out", record it on video and post it. Allegedly TikTok "was aware of the Blackout Challenge", let users participate in it by posting videos of their own self-strangulation and "recommended and promoted Blackout Challenge videos to minors' 'for you pages' through the algorithm." Nylah was one recipient of the directed content video to her "for you page", "which resulted in her death". Section 230 was meant to protect online services from liability for material posted by others, but not the expressive activities of the online services themselves. The curation and direction by algorithmic recommender systems used to keep users engaged with the system were expressive activities by TikTok for which they may be held accountable.

¹¹ *Twitter v. Taamneh* 598 U.S. 471 (2023).

¹² *Gonzalez v. Google LLC* 598 U.S. 617 (2023).

¹³ *Anderson v. TikTok, Inc. and Bytedance, Inc.*, ___ F3d ___ (3rd Cir. 2024).

¹⁴ Communications Decency Act, Section 239, 47 U.S.C. §230.

¹⁵ *Moody v. NetChoice LLC* 144 S. Ct. 2383, 2393 (2024).

¹⁶ *Moody* did not address the issue of the impact of different algorithms as to be expressive activity, including those that "respond solely to how users act online", *id.* at 2404, n.5.

Anderson establishes that the advances in commerce and marketing by online services lead to their services and information falling outside of Section 230 immunity, making them liable for injuries for which they are responsible. This encourages, if not demands, that online service providers protect their users by limiting the harmful content they may provide to them. The online providers have a choice: they can effectively bar vulnerable groups like children from using their systems and being possibly harmed by them, as is required for pornographic materials, or effectively act to protect those vulnerable groups from exploitation.

Responsibility for online injuries may itself be seen as a subset of software liability generally. The European Union's Product Liability Directive seeks to expand liability for software and injuries it may cause (see Shackelford et al., 2025). Acknowledging the inadequacy of liability *post-hoc* measures in some domains to protect others, Shackelford et al. (2025) propose a revised system of liability to promote public safety in systems such as those online. Those revisions expressly extending product liability to include cybersecurity failings require implementation of "secure-by-design" for systems and require transparency and accountability of systems through regulatory frameworks (Shackelford et al., 2025). These may encourage, if not mandate, online systems to implement safety measures for their users.

Another perspective on online systems affecting safety for users can be seen in the example of routine activities theory in crime control as posited by Cohen and Felson (1979). Under the routine activities theory, three elements promote a criminal act: a motivated offender (the criminal), a suitable target (the child), and the absence of a capable guardian. With this comes the greater likelihood of crime. The "motivated offender" class of child sex offenders expands with the pervasiveness and invasiveness of online systems. The online environment expands the set of "suitable targets" that become objects of opportunity for the offender and the calculus of success that an offender makes. That calculus in the online world includes the ease of access to the target, the reward it offers, and features that help avoid detection and promote "ease of escape".

The presence of "capable guardians" refers to constant, present individuals and systems that deter misconduct or sanction offenders. The presence of an effective, capable guardian can mitigate the threat. This approach can be mapped to child protection in the online information space to suggest alternative approaches for the protection of children. This may begin by giving children tools to resist online exploitation through childhood education and using law enforcement investigative activity *pre-* and *post-hoc* to deter and apprehend offenders.

But more is needed, especially as the vast scope of online activity makes automated systems for providing guardians essential. Routine activities theory suggests enhanced protection by development and deployment of the "capable guardian" for online activities, a role made difficult by the engineering and design of online systems.

Major online services provider Meta was found responsible by a New Mexico jury for not protecting minors from solicitation and sexual content via its Facebook and Instagram services (Mulvaney & Bobrowsky, 2026). The next day Meta and Google were found by a California jury to be negligent in their design and operation of their social media systems as to "addict" children to those systems and cause them mental health injuries

(Electronic Privacy Information Center, 2026). If these judgements are appealed there may be greater clarity and legal guidance on online responsibility and the legal liability faced by online service providers for the impact of their services on children.

4. Conclusion

Information and communication technologies, including AI technologies, the data on which AI systems are trained, and the Internet, are all systems of expression. For the U.S., these systems, their input and output, and their expressions of results are protected by the First Amendment to the U.S. Constitution. Although conflicting rationales may be seen in the U.S. case law for validating or preventing regulation of such expression, the majority support free “expression” by such technologies. But those judicial rationales are constrained by the flexibility of analysis that changing facts can lead to changing judicial outcomes. And where speech protections rest on statutory safe harbours for the technology, those may be changed by later statutory amendment.

The compelling interest in protecting children so much at issue in earlier Supreme Court jurisprudence was outweighed by the limited effectiveness of earlier legal and technical systems to protect those children. That, in turn, was weighed against the interests of adults in free expression and free access to information. But times do indeed change, and nothing seems to change more swiftly than information and communication technologies in the modern world. These changes are often for the better, though they may offer new tools for criminality and the victimisation of innocent people. And none are better targets for victimisation than children who are just beginning to develop their skills for critical thinking and analysis. Yet those skills are developing with a limited collection of knowledge and experiences that leave them vulnerable to manipulation and grooming, just as a GPT, trained against a limited language model of partial information, is vulnerable to errors and “hallucinations”.

The need for AI-based systems of threat recognition and child protection with online systems is great, and it is needed without delay. Arguably, these systems can be programmed and used to respect freedom of expression in all its forms, though their introduction doubtless requires considerable societal investment and a tailored legal regime.

After all, misconduct exploiting children is banned in all nations, at least in formal law. Yet, additional regulation should be considered that can facilitate machine support for child protection. The information and communications technologies tools that can lead to injuring children can be designed to protect them from human and machine attacks. Even under the broad speech protections of the laws of the U.S., it is possible to regulate means for detecting and policing online child abuse while leaving those systems effective for child protection. If it can be successfully implemented in the U.S., it is available in every nation. Regulation keyed to linguistic analysis of such misconduct may be drawn to narrowly apply and not unnecessarily infringe on the speech rights of adults. Such carefully and narrowly drawn limits and effective technical systems must be used to promote or mandate such protective systems to protect children from online exploitation.

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The First Amendment and Global Online Speech

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Abstract: This article explores the tensions of free speech and censorship where social media platforms reign supreme in the U.S., but experience the Brussels effect in Europe and beyond. The catalyst for this inquiry is U.S. congressional efforts to investigate alleged EU censorship of American speech. This article examines competing interests and comparative approaches. In the absence of comprehensive regulation in the U.S., companies engaging in multi-country activity operate under the shadow of European regulation. Does compliance threaten to chill American speech? Is balancing the interest of deterring disinformation possible where freedom of thought is paramount to American ideals? Institutional self-regulation creates a competitive marketplace with some American social media giants engaging in heavy-handed content regulation while others claim to let anything go short of targeted harassment. The aim of this article is to honour American free speech and press principles while appreciating genuine threats that may threaten other core American values such as democracy. Balancing benefits and harms remains preferable given American constitutional and policy priorities. To what extent can the – self-enforced and judicial – remedies reflect this balancing approach like equitable relief rather than the blunt hands of banishment and censorship?

Keywords: free speech, First Amendment, social media regulation, EU law, equitable relief

1. Free speech

Free speech allows the public discussion necessary for democratic self-government.¹ Free speech absolutism is quintessentially American. The American approach to free speech, as authoritatively interpreted, is “exceptional” among liberal democracies (Schauer, 2005).

¹ See Rosen (2022). Violence and threats of violence pose grave threats to free speech, the rule of law, and democracy. “Our entire democratic experiment is going to crumble if people don’t believe they are safe when they express their political views” (Murphy, 2025).

This view stands for robust, almost unlimited protection of speech and expression. Of course, absolutism is not truly absolute as U.S. case law reveals exceptions to unlimited free speech.² A prominent governing American narrative remains one of liberty over dignity interests in comparison to a European prioritisation of dignity.³ As a result, the U.S. is notorious for protecting offensive speech (Krotoszynski, 2009, pp. 120, 233). Free speech absolutism is not without internal and external critics (Schauer, 2005). This foundational free speech frame relies on the free-flowing marketplace of ideas in the public square where each listener can listen and participate and rationally discern winning principles and arguments (Krotoszynski, 2009, pp. 13–15). It also relies on the related notion that restraints on speech are antithetical to discourse, discovery and democratic self-governance (Krotoszynski, 2009, pp. 13–18).

This absolutism foundation has cracks, and it has shifted into digital social media platforms, which are very often siloed with exponential echo chambers. On many such social media platforms in the U.S., very little regulation curbs content. Instead, private company content moderation, if any, is the avenue for speech and expression constraints in the virtual square. Federal regulation then shields social media platforms from liability based on the postings of users and protects content moderation policy determinations.⁴ Critics fear abuses of civility, disinformation and dilution of reliable content. The European response is to address such concerns with regulation. The U.S. thus far has relied largely on industry self-regulation for guardrails on content barring tortious activity.

Tension between the American and European approaches is palpable and may increase as companies seek to comply with new EU regulations. “The latest regulation – the broad-ranging Digital Services Act (DSA) – will create a host of tensions and outright conflicts with the U.S. speech regime applicable to social media platforms” (Nunziato, 2023, p. 117). Such comprehensive regulations incentivises multinational platforms to tilt their global content moderation to model EU parameters rather than American priorities of free speech balancing. If so, platforms will adopt EU preferences “protecting against dignitary, reputational, and societal harms more highly than absolute

² See, e.g., *Chaplinsky v. New Hampshire*, 315 U.S. 568 (1942) (establishing that the First Amendment does not protect “fighting words”); *Tinker v. Des Moines*, 393 U.S. 503 (protecting student wearing of armband as a war protest but noting that school officials may suppress speech that materially and substantially interferes with school operations); *Brandenburg v. Ohio*, 395 U.S. 444 (1969) (protecting inflammatory speech unless the speech is aimed at inciting violence); *Miller v. California*, 413 U.S. 15 (1973) (ruling that obscene speech is not protected First Amendment speech).

³ See Whitman (2004, pp. 1160–1164), explaining that “American privacy law is a body caught in the gravitational orbit of liberty values, while European law is caught in the orbit of dignity” and that, in comparative privacy law relative differences matter because Americans and Europeans “are consistently pulled in different directions, and the consequence is that these two legal orders really do meaningfully differ: Continental Europeans are consistently more drawn to problems touching on public dignity, while Americans are consistently more drawn to problems touching on the depredations of the state. Indeed, as our many transatlantic conflicts suggest, the distances between us can often stretch into the unbridgeable”. See also Carmi (2008, pp. 280, 323–324), assessing freedom of expression and free speech through the human dignity and liberty lens, emphasising that, in America, liberty trumps dignity, whereas, dignity overrides liberty in Germany: “Freedom of expression is normally classified as a classical liberty” [...] “[s]imilarly ‘human dignity’ represents the influence of European thinkers, such as Hegel and Kant, on European rights discourse, as well as the increasing trend towards viewing human dignity as both a source of, and a constraint on, human rights.”

⁴ The Communications Decency Act of 1996, 47 U.S.C. § 230 (granting broad immunity).

freedom of expression”. Notably, another contrast in policies is key: the EU countries “generally hold platforms accountable for their role in facilitating harmful content”, while the U.S. “takes the opposite approach” (Nunziato, 2023, p. 117).

The United States House of Representatives Judiciary Committee, led by Chairman Representative Jim Jordan, has launched an investigation asserting that the EU’s DSA regulations unlawfully censor speech (Orbán, 2025). Politically charged statements and rebukes are regular occurrences in the U.S. Congress. A congressional investigation may follow as a politicised weapon sometimes amounting to whataboutism.⁵ “Theatre” and “circus” are two common pejorative refrains to describe and critique congressional investigations and hearings.⁶ Still the inquiry is not necessarily meaningless.⁷ Regardless of inherent political gamesmanship, the Judiciary Committee-led investigation demonstrates potential tensions between EU and American approaches to speech and social media content moderation.

The letter charges that the DSA regulations chilled speech in ways antithetical to U.S. First Amendment speech and press freedoms by stifling American speech (Orbán, 2025).⁸ Specifically, the investigation asserts that the EU’s DSA chills American and Polish speech about political rivals of the Donald Tusk-led Polish government.⁹ The American political backdrop is split on ideological lines with one side pushing for greater content moderation of mis- and disinformation, and the other expressing concern about who is judging what constitutes mis- and disinformation. Those sceptical of such decisionmakers accordingly favour less to no restraints on digital platform political speech.

Ultimately, the Committee has issued a majority staff report condemning Europe’s regulatory and enforcement efforts as blatant censorship. The text content of the Report is thirty-seven pages long, with twenty-two exhibits, together totalling one hundred and forty-five pages. According to the report, EU regulators primarily use the DSA to “target core political speech that is neither harmful nor illegal”, and “pressure platforms, primarily American social media companies, to change their *global* content moderation policies in response to European demands” (Committee on the Judiciary of the U.S. House of Representatives, 2025, p. 1). The report asserts that the EU’s regulatory campaign is meant to address “systemic risks” on the major social media companies such as YouTube, TikTok and Instagram, to identify and mitigate via censorship any “misleading or deceptive content and disinformation, any actual or foreseeable negative effects on civil discourse

⁵ Whataboutism describes the rhetorical strategy of replying to an accusation with a counteraccusation. See Payne (2024).

⁶ See, e.g., Alexander (2008, pp. 193–235), exploring actor Robert Taylor’s reluctant testimony before the United States House of Representatives Committee on Un-American Activities investigating communist ties in Hollywood; describing the hearing as a “circus” and refusing to testify unless subpoenaed.

⁷ See Boyse & Doran (2025): “To examine the context, and contradictions in these issues is not whataboutism.”

⁸ U.S. Constitution, First Amendment: “Congress shall make no law [...] abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.”

⁹ See also Tilles (2025): “Poland’s opposition Law and Justice (PiS) party has blamed the death of a close associate of its leader, Jarosław Kaczyński, on the Polish authorities. She died days after being interviewed by prosecutors investigating allegations of wrongdoing involving a firm linked to Kaczyński.” But cf. Tilles (2024): “The prison service has also appealed to politicians and media to stop “spreading false information.”

and electoral processes”, “hate speech” and “information which is *not* illegal”.¹⁰ Further, the report claims that the EU unfairly targets political opponents, political speech, memes and satire. The pressure, according to the report, includes draconian EU incentives such as massive penalties on global revenue” (Committee on the Judiciary of the U.S. House of Representatives, 2025, pp. 2–3). The report asserts that through the imposition of fact checkers, “trusted flaggers”,¹¹ third-party arbitrators and fines, the EU censorship demands create a global censorship regime via the DSA that social media companies ignore at their peril. All of which, per the report, results in the imposition of “voluntary ‘codes of conduct’ on hate speech and disinformation” (Committee on the Judiciary of the U.S. House of Representatives, 2025, pp. 2–3). The report asserts that the conduct codes are essentially mandatory because the codes will be used by the EU to assess compliance with the DSA, including prohibitions on hate speech and disinformation (Committee on the Judiciary of the U.S. House of Representatives, 2025, p. 23).

In the United States, social media companies possess broad immunities from liability and are not otherwise regulated regarding content moderation. Accordingly, social media platforms, such as Facebook, Instagram and Twitter (now X), make their own content moderation protocols and decisions. In 2022, Elon Musk purchased Twitter renaming it X, and declared himself an absolutist on free speech promising that he would foster a free speech environment (Thompson, 2025). Without pressure from U.S. regulatory efforts and relatively no domestic guardrails forthcoming, the potential influence of EU efforts is worth watching closely. Will the EU’s regulatory regime help foster best practices or result in overreach?

The House Judiciary Committee maintains that the EU has overzealously regulated potential disinformation that effectively blocks politically disagreeable content (Jordan, 2025b; 2025a, citing Palmer, 2025). EU regulators designed the DSA to achieve “effects ‘in the United States’” (Committee on the Judiciary of the U.S. House of Representatives, 2025, p. 31). According to the Committee’s letter to the EU, the House is investigating “how and to what extent foreign laws, regulations, and judicial orders compel or coerce companies to censor speech in the United States” (Jordan, 2025b, p. 1). Multinational companies, by definition, operate in more than one country. When such companies operate within Europe and operate in countries beyond Europe, compliance with EU laws may translate into a global policy matching European strictures even if lawful in other countries such as the U.S.¹² The House Committee’s investigation seeks to uncover, spotlight and scrutinise such examples. It also alleges that the Biden–Harris administration “aided or abetted” the efforts of “foreign governments” to restrict “American’s access to lawful speech in the United States” (Palmer, 2025, quoting

¹⁰ Citing Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market for Digital Services and Amending Directive 2000/31/EC (Digital Services Act), 2022 O.J. (L277), at recitals 80–84, Articles 34–35 (emphasis added by committee report).

¹¹ Committee on the Judiciary of the U.S. House of Representatives (2025, p. 20): “Trusted flaggers must publish reports to EU regulators outlining the notifications given to platforms and the actions platforms took in response.” The report criticizes the lack of independence for the flagger requirement: “Flaggers can also have relationships with European regulators” (Committee on the Judiciary of the U.S. House of Representatives, 2025, p. 20).

¹² For examples of top 20 multinational companies headquartered in the U.S. (such as Apple Inc. and Alphabet Inc., owner of Google, YouTube, and more), see Afzal (2023).

Representative Jordan's statement). A key aim is to create political pressure that lessens restraints on digital platform speech including, for example, political speech supporting adversaries in Poland's election. Overall, the Committee alleges that the EU regulations claim to enhance online safety but instead constitute formidable censorship (Committee on the Judiciary of the U.S. House of Representatives, 2025, p. 37). The Committee asserts that content core to the First Amendment of the U.S. Constitution is under siege,¹³ and that the EU regulatory offensive unfairly targets political conservatives.¹⁴ Regardless of one's position on the value of the underlying speech, the Committee's allegations raise concerns worth examining and perhaps addressing as major social media companies experience increasing pressures to heighten global content moderation policies.

2. The disinformation threat

Disinformation is on the rise. It is a threat to democracies (Krotoszynski et al., 2025, p. 5). According to the EU, disinformation harms democracies and European citizens by "eroding trust in institutions and media, putting elections at risk, hampering citizens' ability to make informed decisions, and impairing freedom of expression" (European Commission, s. a.). Most people believe that disinformation threatens democracy [European Commission (s. a.) reporting that 83% of people think disinformation threatens democracy]. The European approach is to regulate and deter disinformation. The EU established an updateable Code of Practice on Disinformation (European Commission, 2018), described as "a pioneering framework to address the spread of disinformation, agreed upon by a number of relevant stakeholders" (European Commission, 2022). This voluntary code of conduct is now incorporated into the EU's DSA.

The full-throated free speech mantra for many in the U.S. is to permit information to flow freely without concern, or regulation, of disinformation. Some in the U.S. are rethinking whether this unlimited approach is sustainable in the modern context. Pressure points include the exponential potential of disinformation given the reach of content on online platforms, the use of countless bots, and the accelerated scope due to algorithmic pushing (Wirtz et al., 2026). All these features have the potential to deteriorate dialogue, enhance ideological silos, and, at worst, damage democratic self-governance (Krotoszynski et al. 2025, p. 5). Such pressure points also may skew the flow of the marketplace of ideas so much that it weakens the ability of discernment and rationality to operate. With such influences rising, reconsideration of an anything-goes stance may be warranted.

Still, banning and censoring do not come easily to the American psyche whether via regulation or institutional self-moderation. Methods that may garner greater traction could include permitting the speech to exist but flagging the potential for disinformation. Such systems are better than binary approaches, but intense scrutiny is essential because how

¹³ Committee on the Judiciary of the U.S. House of Representatives (2025, p. 37): "The content under threat includes humor, satire, and core political speech—hallmarks of free expression."

¹⁴ Committee on the Judiciary of the U.S. House of Representatives (2025, p. 4): "The censorship is largely one-sided, almost uniformly targeting political conservatives."

information is categorised or labelled and potentially flagged or downgraded in reach becomes an opportunity for manipulation of narratives by those in power. Those in power may be ideological partisans or the owners of private corporations running social media empires where disinformation often flourishes. Who decides what constitutes disinformation and will such decisions have any transparency? Those are the types of questions that typically stymie any systematic real efforts to curtail disinformation in the U.S.

Of course, certain legacy media outlets and social media platforms make such decisions and deemphasise certain content or censor it altogether (see, e.g., U.S. House of Representatives, 2023). Critics accuse the censors of biased media by suppressing only the views that do not comport with owners or with the ideological bent of their readership. For better or worse, such claims deepen silos and echo chambers while also weakening public perceptions of credibility of news outlets.

The control of owners of social media companies is enormous given the virtual lack of regulation in the U.S. For example, on X, critics allege that Musk purposefully deemphasised their social media influence. One example is Anastasia Loupis, who operated an X account that garnered intense viewership – daily hitting hundreds of thousands of people with far-right takes, conspiracy allegations and anti-Semitic rhetoric. After critiquing X-owner Musk for his support of visa programs loathed by MAGA-minded Trump backers, Loupis’s social media impact plummeted without rebound. Similar phenomena occurred with several others.¹⁵ Of course, these examples, if true, may be the result of other factors or driven by animus rather than an effort to minimise disinformation. Musk had previously disclaimed any silencing of critics.¹⁶ Regardless, the power that social media companies have over the algorithms is palpable.

Political levers are also at play even in the absence of regulation in the U.S. Allegations of governmental interference exist with respect to presidential efforts to influence the treatment of certain content. For example, the Biden White House sought to lessen the impact of what it deemed election disinformation (see, e.g., PBS, 2024). Admittedly, the Biden White House held regular meetings with certain social media platform leaders including Facebook and X.¹⁷ The administration sought to persuade Facebook to moderate certain, alleged disinformation on elections and public health, for example. Facebook, and other social media companies, did minimise and remove alleged disinformation, but may have done so based on governmental persuasion and their own judgments rather than unlawful coercion. Facebook, however, verified the White House’s exertion of pressure, and appeared to express lament about caving to the pressure. Facebook’s head, Mark Zuckerberg, stressed: “We made some choices that, with the benefit of hindsight and new information, we wouldn’t make today. [...] We’re ready to push back if something like this

¹⁵ See Thompson (2025): “The *New York Times* found three users on X who feuded with Mr. Musk in December only to see their reach on the social platform practically vanish overnight. The accounts are the starkest signs yet that Mr. Musk or others at the company have the power to punish critics and that they may be willing to use it, startling free speech advocates who hoped that the billionaire would be their champion.”

¹⁶ See Thompson (2025): “There will always be critics. [...] What is perhaps notable is that I don’t attempt to silence them even on a platform that I own.”

¹⁷ *Murthy v. Missouri*, 603 U.S. 43 (2024). “Thus, the officials peppered Facebook (and to a lesser extent, Twitter and YouTube) with detailed questions about their policies, pushed them to suppress certain content, and sometimes recommended policy changes. Some of these communications were more aggressive than others.”

happens again” (PBS, 2024). The presidential administration maintained that such conversations and encouragement are ordinary and permissible. Challengers filed suit against the administration asserting that the government unlawfully coerced social media giants into eliminating certain posts from their platforms.¹⁸

The litigation failed to resolve the merits due to jurisdictional failings. Five social media users plus Louisiana and Missouri attorneys general brought the suit against the Biden Administration for violation of constitutional rights to free speech.¹⁹ Plaintiffs described the Administration’s actions as unsavoury “jawboning” by pressuring social media “companies into suppressing speech that the government did not agree with, mainly about the coronavirus pandemic” (Faguy, 2024). The pressure allegedly included threats to curtail Section 230 immunity of the Communications Decency Act,²⁰ upon which social media companies heavily rely to shield the bulk of their content moderation decision-making and related liability for their users’ postings.²¹ They alleged that, in the wake of communications with the Administration, the platforms minimised or suspended accounts (Faguy, 2024). According to plaintiffs, this pressure by the White House on social media companies to minimise or remove mis- and disinformation converted the companies’ content-moderation determinations into state action thereby violating First Amendment speech rights.²² The U.S. Supreme Court, in a 6–3 vote, ordered dismissal of the suit based on plaintiffs’ failure to prove all the elements of standing to seek the requested injunctive relief.²³

The majority reasoned that plaintiffs failed the three irreducible minimums of Article III standing,²⁴ which must be clearly demonstrated at the preliminary injunction phase.²⁵ First, plaintiffs failed to demonstrate a sufficient causal link establishing that the government’s actions led to restriction of plaintiffs’ content. It was unclear, in the Court’s assessment, that any suppression occurred because of government pressure instead of independent content moderation policies of the platform companies.²⁶ The tenuous nature of causation was fatal. Next, the Court also determined that plaintiffs failed to show a substantial risk of future injury traceable to the challenged actions, especially given the significant decrease in White House communications with social media platforms about Covid-19 and election misinformation. Last, the Court ruled that plaintiffs could not satisfy the redressability prong of standing requirements because the grant of an injunction against the government would be unlikely to affect platform moderation decisions of the relevant companies.

¹⁸ *Murthy v. Missouri*, 603 U.S. 43 (2024).

¹⁹ *Murthy v. Missouri*, 603 U.S. 49 (2024).

²⁰ Communications Decency Act, 47 U.S.C. § 230 (1996).

²¹ See, e.g., Wold (2023), asserting that major social media companies have invoked Section 230 not only to rebuke tort victims’ claims, but also “to prevent courts *from hearing the cases at all*”.

²² *Murthy v. Missouri*, 603 U.S. 54 (2024).

²³ *Murthy v. Missouri*, 603 U.S. 76 (2024).

²⁴ *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560–1 (1992), providing that plaintiffs must satisfy three Article III requirements: injury-in-fact, causation and redressability.

²⁵ *Murthy v. Missouri*, 603 U.S. 58 (2024).

²⁶ *Murthy v. Missouri*, 603 U.S. 61–62 (2024).

Justice Alito, joined by Justices Thomas and Gorsuch, dissented.²⁷ The dissenting opinion noted the voluminous record establishing plaintiffs' standing and their right to injunctive relief. According to Justice Alito, "this is one of the most important free speech cases to reach this Court in years".²⁸ Justice Alito's dissent emphasised the district court's determination that the White House, via high-ranking officials, had engaged in "a far-reaching and widespread censorship campaign" against disfavoured speakers on social media platforms.²⁹ The dissenting opinion described the pedigree of those targeted by the administration's "unrelenting pressure" in suppression efforts and their desire to speak on matters of "the utmost public importance".³⁰ The dissenters endorsed the district court's issuance of a preliminary injunction to protect plaintiffs' speech rights and the affirmance by the U.S. Court of Appeals for the Fifth Circuit.³¹ Notably, Justice Alito acknowledged that "a fair portion" of users' social media posting on Covid-19, and the pandemic had "little lasting value", and even that some such content "was undoubtedly untrue or misleading, and [...] may have been downright dangerous".³² Justice Alito notes that "we know that valuable speech was also suppressed". He then echoes a free speech absolutism principle: "That is what inevitably happens when entry to the marketplace of ideas is restricted." Notwithstanding purely private media companies' rights to publish anything they choose, the dissenters assert government coercion of private companies to suppress speech is unconstitutional. In the dissenters' assessment, plaintiffs amply satisfied all three standing doctrines to justify injunctive relief against the Administration.³³ The dissenting opinion closes with favourable analysis on the merits of the First Amendment claim for the most compelling plaintiff, Jill Hines, a healthcare activist confronting Covid-19 strictures on Facebook.³⁴ It emphasises the unlawful coercion of the administration, for example: "In sum, the officials wielded potent authority. Their communications with Facebook were virtual demands. And Facebook's quivering responses to those demands show that it felt a strong need to yield." The dissenters conclude, on the merits, that "the White House coerced Facebook into censoring [Hines's] speech".³⁵

The *Murthy* Court's ruling on standing grounds leaves many open issues. Such rulings inherently render unresolved the merits of the allegations. Evidence showed pressure by the government on social media platforms, but the Court did not view such evidence as sufficient to establish. According to the Court, plaintiffs failed to establish the causal link required as part of Article III constitutional standing. In other words, in the Court's estimation, other factors may have motivated social media platforms to censor the content.

²⁷ *Murthy v. Missouri*, 603 U.S. 76 (2024), Justice Alito dissenting.

²⁸ *Murthy v. Missouri*, 603 U.S. 77 (2024).

²⁹ *Murthy v. Missouri*, 603 U.S. 76 (2024), quoting *Missouri v. Biden*, 680 F. Supp. 3d 630, 729 (West. Dist. La. 2023).

³⁰ *Murthy v. Missouri*, 603 U.S. 77 (2024).

³¹ *Murthy v. Missouri*, 603 U.S. 77 (2024), noting ample evidence supporting the requested injunctive relief affirmed in *Missouri v. Biden*, 83 F. 4th 350 (5th Cir. 2023).

³² *Murthy v. Missouri*, 603 U.S. 78 (2024).

³³ *Murthy v. Missouri*, 603 U.S. 79 (2024).

³⁴ *Murthy v. Missouri*, 603 U.S. 79 (2024), evaluating the merits of the strongest plaintiff in its view; *Murthy v. Missouri*, 603 U.S. 68 (2024), acknowledging that Hines "makes the best showing of all the plaintiffs", but concluding that "most of the lines she draws are tenuous".

³⁵ *Murthy v. Missouri*, 603 U.S. 108 (2024).

Reasonable minds may disagree on the legal determination of the causal factor. But governmental pressure on companies and the resulting removals remain facts. How should one view those remaining facts: helpful governmental guidance to minimise mis- and disinformation versus improper governmental interference encroaching on a robust free market of ideas? For those, like the dissenting opinions, that see the administration's coercion as violative, the government's behaviour is cast as contra liberty and American free speech exceptionalism. For those aligned with the government's effort to curtail misinformation, liberty interests are overcome by the need to protect democracy from unfair influences. The Court, by finding a lack of standing, left the ultimate resolution of such important free speech questions for another day.

The Biden Administration is not the only actor in the U.S. that has sought to affect content moderation. Typically, influence is achieved through lobbying for legislation or litigating to challenge policies or enforcement. A recent example occurred after Texas and Florida passed content moderation regulation for social media platforms.³⁶ A group of affected networks, represented by an internet trade association called NetChoice, sued to enjoin enforcement of both statutes as facially unconstitutional.³⁷ The statutes mandated that covered platforms, such as YouTube and Facebook, must moderate content evenhandedly in "a consistent manner", and provide explanations for any censored or removed posts from the website.³⁸ The U.S. Court of Appeals for the Eleventh Circuit enjoined enforcement of the Florida statute as unconstitutionally constraining free speech.³⁹ It reasoned that the statute infringed on NetChoice editorial judgement.⁴⁰ In contrast, the U.S. Court of Appeals for the Fifth Circuit found that the Texas regulation did not violate the First Amendment. In fact, it "disagreed across the board".⁴¹ According to the Fifth Circuit, platform content-moderation actions are "not speech" on any level, and therefore do not raise First Amendment concerns.⁴²

The United States Supreme Court, in *Moody v. NetChoice*, determined that both appellate courts needed to more fully review a developed record to conduct the proper

³⁶ Fla. Stat. Ann. §§ 501.2041(1)(b), 501.2041(2)(b), 501.2041(2)(d)(1), 501.2041(2)(h), 501.2041(2)(i), 501.2041(3); Tex. Bus. & C. Code § 120.103(a)(1), 120.103(a)(2), 120.104; Tex. Civ. Prac. & Rem. Code Ann. §§ 143A.001(1), 143A.002(a), 143A.006; see also *Moody v. NetChoice, LLC*, 603 U.S. 707, 720 (2024). "In 2021, Florida and Texas enacted statutes regulating internet platforms, including the large social-media companies just mentioned. The States' laws differ in the entities they cover and the activities they limit. But both contain content-moderation provisions, restricting covered platforms' choices about whether and how to display user-generated content to the public. And both include individualized-explanation provisions, requiring platforms to give reasons for particular content-moderation choices."

³⁷ *Moody v. NetChoice, LLC*, 603 U.S. 717 (2024).

³⁸ *Moody v. NetChoice, LLC*, 603 U.S. 720–721 (2024).

³⁹ *Moody v. NetChoice, LLC*, 603 U.S. 722 (2024), citing *NetChoice, LLC v. Attorney General, Florida*, 34 F.4th 1196 (11th Cir. 2022).

⁴⁰ *Moody v. NetChoice, LLC*, 603 U.S. 721–722 (2024): "When a social-media platform 'removes or deprioritizes a user or post', [...] it makes a judgment rooted in the platform's own views about the sorts of content and viewpoints that are valuable and appropriate for dissemination;" quoting *NetChoice, LLC v. Attorney General, Florida*, 34 F.4th 1210.

⁴¹ *Moody v. NetChoice, LLC*, 603 U.S. 722 (2024).

⁴² *Moody v. NetChoice, LLC*, 603 U.S. 722 (2024), quoting *NetChoice, LLC v. Paxton*, 49 F.4th 439, 466, 494 (2022).

facial constitutional challenge.⁴³ The Court, in a majority opinion penned by Justice Elena Kagan, then provided precedential analysis to guide the inquiry.⁴⁴ It underscored several points. First, editorial functions alone may constitute “an aspect of speech” or “engaged in speech activity.”⁴⁵ Second, this reasoning does not alter simply because the provider permits most items and excludes few. Last, “the government cannot get its way by asserting an interest in improving, or better balancing the marketplace of ideas.”⁴⁶ The Court emphasised that new modalities do not change the fundamental First Amendment principles at play.⁴⁷ According to the Court, enforcement of Texas’s law would dictate that platforms would be unable to disfavour certain viewpoints, which many of the platforms restrict. In fact, the Texas law would “profoundly alter the platforms’ choices about the views they will, and will not, convey.”⁴⁸ Ultimately, the Court concluded that under any level of scrutiny, the Texas law fails First Amendment review. Rather, “the interest Texas has asserted [to balance the mix of speech presented via social-media platforms] cannot carry the day: It is very much related to the suppression of free expression, and it is not valid, let alone substantial.”⁴⁹ It is core to First Amendment goals that states not encroach on private speech to promote its own view of ideological balance.⁵⁰ Such state manoeuvres would promote certain views while impermissibly burdening others.⁵¹ Accordingly, on remand NetChoice must establish that either Texas’s or Florida’s law “prohibits a substantial amount of protected speech relative to its plainly legitimate sweep.”⁵²

The Supreme Court noted that neither circuit court conducted the full analysis for the facial challenge, but continued on to declare that the Fifth Circuit already demonstrated a crucial flaw in its reasoning because,⁵³ as the Court clarified: editorial judgements constitute constitutionally protected expression. Further, Texas’s desire for a different mix of expression does not justify the intrusion on the private speech of others. The Supreme Court’s conclusion reinforced fundamental First Amendment principles: “To give government that power is to enable it to control the expression of ideas, promoting those it favors and suppressing those it does not. And that is what the First

⁴³ *Moody v. NetChoice, LLC*, 603 U.S. 726 (2024). Justice Amy Coney Barrett warned about the path of a facial rather than an as-applied challenge: “A facial challenge to either of these laws likely forces a court to bite off more than it can chew.” *Moody v. NetChoice, LLC*, 603 U.S. 747 (2024), Justice Barrett concurring.

⁴⁴ *Moody v. NetChoice, LLC*, 603 U.S. 726–731 (2024).

⁴⁵ *Moody v. NetChoice, LLC*, 603 U.S. 731 (2024), internal quote marks and citations omitted.

⁴⁶ *Moody v. NetChoice, LLC*, 603 U.S. 732 (2024).

⁴⁷ *Moody v. NetChoice, LLC*, 603 U.S. 733 (2024).

⁴⁸ *Moody v. NetChoice, LLC*, 603 U.S. 737 (2024), noting several examples such as supporting Nazism, terrorism and Islamophobia.

⁴⁹ *Moody v. NetChoice, LLC*, 603 U.S. 740 (2024).

⁵⁰ *Moody v. NetChoice, LLC*, 603 U.S. 741 (2024).

⁵¹ *Moody v. NetChoice, LLC*, 603 U.S. 742 (2024).

⁵² *Moody v. NetChoice, LLC*, 603 U.S. 743–744 (2024).

⁵³ Justices Thomas and Alito separately criticised this pivot by the majority into dictum. See *Moody v. NetChoice, LLC*, 603 U.S. 749–750 (2024), Justice Thomas concurring (emphasising the Court’s focus on the incomplete and underdeveloped records in the lower appellate courts, but then continues on to address various applications); *Moody v. NetChoice, LLC*, 603 U.S. 766–767 (2024), Justice Alito concurring. “The holding in these cases is narrow: NetChoice failed to prove that the Florida and Texas laws they challenged are facially unconstitutional. Everything else in the opinion of the Court is nonbinding dicta.”

Amendment protects all of us from.”⁵⁴ The Court’s reasoning evidences respect for free speech absolutism. It perhaps invites future modified regulatory reform that steers clear of viewpoint preferencing. In the meantime, however, it leaves content moderation in the hands of social media platforms.

Efforts to influence social media platform moderation policies are not limited to the U.S. Risks of disinformation can be dire to democracy and public health, and administrations may well wish to influence the tenor of important debates on the ever-powerful social media platforms. The congressional investigation is, in the eyes of some, a legitimate inquiry into speech suppression. It is also, in the eyes of adversaries, nothing more than a governmental effort to influence content moderation decisions against suppression of disinformation and an ideologically driven push to affect an election towards an aligned leader. Still, underlying concerns about who determines what content constitutes disinformation are legitimate. Efforts by governments, if unduly coercive, are also problematic.⁵⁵ Permissible persuasion, however, is lawful.⁵⁶ EU efforts to regulate content within its borders are also legitimate, but extraterritorial reach could be problematic depending on the methods of achieving that consequence. Drawing these types of lines is the challenge for the ideal protection of rights, comity among countries, and proper shaping of regulations and remedies.

Even if the U.S. stays the course of little regulation and institutional self-monitoring, Europe’s ability to influence outcomes exceeds its borders. The premise of Representative Jordan’s attack and the committee’s investigation and report is that the EU is chilling American speech. This effect is possible given the reach of compliance efforts with EU regulations known as the Brussels effect⁵⁷ in that European regulatory efforts will influence policy beyond its geographical frame into the U.S. and its companies. If true, the Brussels effect is at minimum a phenomenon worth watching closely, and at maximum, may pose

⁵⁴ *Moody v. NetChoice, LLC*, 603 U.S. 744 (2024).

⁵⁵ *Bantam Books, Inc. v. Sullivan*, 372 U.S. 58, 67 (1963) (holding that the government cannot coerce third-party intermediaries to stifle disfavoured speech). In *Bantam Books*, Rhode Island created a state commission to review book materials to protect minors from offensive, indecent, and obscene language and images. *Bantam Books, Inc. v. Sullivan*, 372 U.S. 59–72 (1963). The commission would review and determine if the materials were objectional for underage minor readers, and, if so, would request the distributors “cooperation”, coupled with a warning that the commission had shared “objectionable” publications with the local police departments and would abide by its duty to recommend prosecution of distributors of obscenity. *Bantam Books, Inc. v. Sullivan*, 372 U.S. 59–72 (1963). The Supreme Court ruled that this state “system of informal censorship” violated the First and Fourteenth Amendments. The Court emphasised a limitation on its rationale, however: “We do not hold that law enforcement officers must renounce all informal contacts with persons suspected of violating valid laws prohibiting obscenity.” *Bantam Books, Inc. v. Sullivan*, 372 U.S. 71 (1963). Rather, according to the Court, “[w]here such consultation is genuinely undertaken with the purpose of aiding the distributor to comply with such laws and avoid prosecution under them, it need not [hinder] the full enjoyment of First Amendment freedoms. But that is not this case.” *Bantam Books, Inc. v. Sullivan*, 372 U.S. 71–72 (1963). In the *Bantam* Court’s view, the commission was not law enforcement officers; rather “[t]heir operation was in fact a scheme of state censorship effectuated by extra-legal sanctions; they acted as an agency not to advise but to suppress.” *Bantam Books, Inc. v. Sullivan*, 372 U.S. 72 (1963).

⁵⁶ *Bantam Books, Inc. v. Sullivan*, 372 U.S. 71–72 (1963).

⁵⁷ See Bradford (2020), documenting how the EU, despite political turmoil, constitutes an influential superpower shaping the world to its liking across a host of important arenas including data privacy, environmental protection, antitrust, online hate speech, and consumer health and safety.

possible overreaches given the juxtaposed philosophical approaches between the EU and the U.S. on free speech and expression principles.

3. The Brussels effect⁵⁸

The investigation's premise may gain momentum due to the phenomenon described as the Brussels effect (Bradford, 2012, p. 3). It connotes the significant influence that the EU has in shaping policy via regulations that force compliance for multinational companies (Bradford, 2012, p. 3). It enables the EU to channel its regulatory prowess into measurable influence (Bradford, 2012, p. 7). With a deeper, full "understanding of the conditions underlying the Brussels Effect explains why the EU, as opposed to any other large economy, can unilaterally supply global standards".⁵⁹ Further, such influence means that the EU sets targets for the world (Bradford, 2012, p. 3; Bradford, 2020, pp. 7–25). The DSA, following the trend of the effect of preceding European codes, "will likely further instantiate the Brussels effect, whereby platforms shape their globally applicable content moderation policies and practices to conform to the dictates of EU regulations" (Nunziato, 2023, p. 120). This power is remarkable and has the potential to do much good in the world. For the U.S., however, the Brussels effect raises genuine concerns given the divergence of interests.

The consequences of the Brussels effect may cause multinational companies to suppress American speech that would, or at least could, otherwise thrive in the U.S. This phenomenon might occur even if the original contemplation of the EU Code's reach was only within the EU. It would simply be easier and more efficient for companies to comply with EU regulations and practices globally.⁶⁰ Failure to comply at all would expose multinational platform companies to unacceptable risk.⁶¹ For example, adhering to EU anti-hate speech principles might cause a multinational platform company to alter its terms-of-service agreements for compliance (Nunziato, 2023, p. 122).⁶² Once the company makes the adjustment, it likely will use the same terms-of-agreement blocking such hate

⁵⁸ See Bradford (2012, pp. 1, 3), coining the phrase, "The Brussels Effect", and describing it as a deeply underestimated aspect of European power that the discussion on globalisation and power politics overlooks: Europe's unilateral power to regulate global markets. The European Union sets the global rules across a range of areas, such as food, chemicals, competition and the protection of privacy. EU regulations have a tangible impact on the everyday lives of citizens around the world."

⁵⁹ See Bradford (2012, p. 7): "Thus, the discussion of the Brussels Effect provides a more nuanced theory of the conditions under which a single jurisdiction can exert regulatory influence outside its borders."

⁶⁰ See Nunziato (2023, p. 122): "Although it was initially contemplated that the EU Code of Conduct would apply to content moderation only within the EU, the platforms unsurprisingly found it easier to comply with the Code's requirements globally. [...] A similar Brussels Effect likely flowed from the recently adopted EU Code of Practice on Disinformation."

⁶¹ See Nunziato (2023, p. 124): "A platform's decision not to moderate any content, however, would render it in violation of the DSA."

⁶² See also Keats Citron (2018, pp. 1055–1056): "Companies' presumptive deletion of hate speech [under EU regulations] is bound to have a global impact because [terms-of-service] agreements are involved rather than court orders or other forms of legal process."

speech content everywhere (Nunziato, 2023, p. 122),⁶³ including where the content might be lawful. Accordingly, under the Brussels effect, such “platforms will likely alter their globally applicable terms of service and content moderation guidelines in response to the DSA’s mandates in ways that will be speech restrictive worldwide” (Nunziato, 2023, p. 122).

Again, the Brussels effect should be continuously monitored and assessed. Some will praise it; others will lambaste it. Regardless, the momentum is already in play and is impressive. It remains to be seen whether the European influence will promote best practices that appropriately balance interests or encroach too far on free speech rights in the U.S. when major social media companies alter their global content moderation policies in fear of EU reprisal. Still, greater transparency could benefit deeper insight by all.

4. The central tension

Friction, and even palpable conflict, between the EU DSA and U.S. free speech principles is inevitable given competing sensibilities. The Brussels effect intensifies this likelihood.⁶⁴ The DSA will enhance the pattern of EU regulations “incentivizing platforms to skew their global content moderation policies toward[s] Europe’s balance of speech harms and benefits – instead of the U.S.’s balance.”⁶⁵ This European oversized influence on content moderation policies and norms will further entrench U.S. congressional views that favour the ongoing and similar investigations alleging EU suppression of American speech. Additionally, it will stoke the rhetorical fires of dissension.

The right to disagree vehemently; the right to speak one’s mind without fear of repercussion; the right to criticize the government; the right to offend – these are just a few core examples of U.S. free speech absolutism. European core principles, such as safeguarding human dignity and respect,⁶⁶ compete with this absolutism. This disparity is not the complete picture, of course. The story is more complex. For example, American colleges and universities adopt and impose hate speech codes for community wellbeing and respect of diverse student populations (Aichinger, 2023). Such codes typically prohibited offensive and intolerant speech aimed at students or groups based on protected minority status (Aichinger, 2023). These academic hate codes often continue in place notwithstanding federal court rulings invalidating such codes as violative of the First Amendment free speech rights of students (Aichinger, 2023).⁶⁷ The Supreme Court has not resolved the validity or invalidity of campus speech codes, but it has adopted First Amendment rationales that protects hideous speech and expression because the

⁶³ See also Keats Citron (2018, pp. 1055–1056), noting that terms-of-service [TOS] “agreements are typically the same across the globe. Thus, decisions to delete or block content as TOS violations mean content will be deleted or blocked everywhere the platform is viewed”.

⁶⁴ See Nunziato (2023, p. 127): “The recent adoption of the DSA will bring with it tension and in some cases outright conflict with the U.S. free speech regime applicable to social media platforms.”

⁶⁵ See Nunziato (2023, p. 127), concluding that the continuation of this trend “will solidify the EU’s position of being the global driver of internet content moderation policies”.

⁶⁶ EU Charter of Fundamental Rights, Article 1: “Human dignity is inviolable. It must be respected and protected.”

⁶⁷ See, e.g., *Doe v. University of Michigan*, 721 F. Supp. 852 (E.D. Mich. 1989), invalidating university hate speech code for vagueness, overbreadth, and viewpoint discrimination.

government cannot restrict speech based on “its disapproval of the ideas”.⁶⁸ Such reasoning indicates the U.S. remains committed to a robust marketplace of ideas even when those ideas are abhorrent and offensive. To lawfully restrict, the speech must rise to the level of fighting words,⁶⁹ obscenity,⁷⁰ intimidation,⁷¹ or targeted harassment (Tsesis, 2017).⁷² Thus, there is much speech the U.S. continues to tolerate that Europe bans. Accordingly, starting frames of the U.S. and Europe may translate into overriding values that are at times irreconcilable.

In addition to competing views, U.S. regulatory reform efforts may invoke First Amendment frames that juxtapose with European platform regulatory approaches. The DSA and the Brussels effect contrasts with proposed federal legislation in the U.S. that aims to prohibit viewpoint discrimination in content moderation systems whether human or algorithmic driven (Nunziato, 2023, p. 124). One such legislative proposal, though it did not become law, is the Disincentivizing Internet Service Censorship of Online Users and Restrictions on Speech and Expression Act (DISCOURSE Act),⁷³ introduced in the Senate by then-Senator Mark Rubio. A key feature of this legislative effort was to limit Section 230 immunity for platforms engaging in viewpoint discrimination via human or algorithmic content moderation.⁷⁴ Such viewpoint restrictions may be likely by U.S. social media companies who alter their global content moderation policies and practices “in response to the DSA’s mandates in ways that will be speech restrictive worldwide” (Nunziato, 2023, p. 122).

It is impossible to operate content moderation in compliance with edicts like those of the EU regulations that prohibit hate speech without colliding with view-point discrimination prohibitions of the U.S. Of course, the U.S. restrictions generally apply to

⁶⁸ *R.A.V. v. St. Paul*, 505 U.S. 377 (1992), invalidating, as violative of the First Amendment, the city’s hate speech ordinance prohibiting hate symbols such as swastikas and cross-burnings. For helpful exploration of competing arguments for and against hate speech codes, see Papandrea (2017).

⁶⁹ *Chaplinsky v. New Hampshire*, 315 U.S. 568 (1942), establishing the fighting words doctrine as a category of speech not protected by the First Amendment.

⁷⁰ *Miller v. California*, 413 U.S. 15 (1973), defining test for obscene speech that lacks First Amendment protection when without serious literary, artistic, political, or scientific value.

⁷¹ *Terminiello v. Chicago*, 337 U.S. 1 (1949), holding that a breach of peace ordinance unconstitutionally infringed on First Amendment free speech rights. Following the reasoning of *Terminiello*, some campus speech codes protect speakers against the “heckler’s veto” where a heckler seeks to silence the speaker via intimidation and humiliation (Aichinger, 2023).

⁷² See also The Communications Decency Act of 1996, 47 U.S.C. § 230(c)(2), providing immunity for social media platforms for “any action voluntarily taken in good faith to restrict access to or availability of material that the provider or user considers to be obscene, lewd, lascivious, filthy, excessively violent, harassing, or otherwise objectionable, whether or not such material is constitutionally protected”.

⁷³ DISCOURSE Act, S. 2228, 117th Cong. (2021) (<https://perma.cc/8LXU-T9ND>).

⁷⁴ DISCOURSE Act, S. 2228, 117th Cong. (2021) § 2(a)(2)(B) provides that “[i]f an interactive computer service provider with a dominant market share: (i) engages in a content moderation activity that reasonably appears to express, promote, or suppress a discernible viewpoint for a reason that is not protected from liability under subsection (c)(2), including reducing or eliminating the ability of an information content provider to earn revenue, with respect to any information, the interactive computer service provider shall be deemed to be an information content provider with respect to that information; or: (ii) engages in a pattern or practice of content moderation activity that reasonably appears to express, promote, or suppress a discernible viewpoint for a reason that is not protected from liability under subsection (c)(2), including reducing or eliminating the ability of an information content provider to earn revenue, the interactive computer service provider shall be deemed to be an information content provider with respect to all information that is provided through the interactive computer service”.

state actors, and so far, not to online social media platforms. The proposal does seek to amend Section 230 to provide that the Communication Decency Act's limitation on liability would not apply unless the platform has complied with the proposed legislation (Nunziato, 2023, p. 124, discussing Rubio, 2021). The Senator Rubio-led effort, however, has not progressed. Regardless, the underlying tension remains a relevant point of concern.

5. Lessons for a balancing approach with remedies-centred solutions

The congressional investigation highlights and exacerbates tensions that threaten the American commitment to free speech absolutism. It also pits America against the EU. The comparative philosophical approaches have never fully aligned. As noted, the U.S. leads with freedom of speech in its Bill of Rights, protecting liberty interests; whereas European countries prioritise other fundamental rights like human dignity. The congressional investigation's rhetoric converts the contrast and the EU regulations into a potential act of aggression threatening American free speech across social media platforms. This rhetorical frame is unfortunate as it lacks comity, though it may still raise reasons for concern about potential chilling of American speech. Is it possible to respect the EU's commendable efforts to regulate the most problematic speech with nuance, while defending the free speech rights of Americans?

A future article will address how a remedies-centred approach may offer useful lessons, guidance, and techniques to bring the United States free speech framing closer to a European stance. Remedies law is deeply familiar with balancing interests, especially when applying principles of equitable discretion regarding whether to permit the remedy and, if so, how to shape it. Balancing interests and tailoring relief might enable the United States to honour liberty while respecting dignity and to promote robust dialogue while discouraging disinformation. Extensive remedial resources (Dobbs & Roberts, 2018) exist for developing such solutions in a follow-on scholarly treatment. Important related questions warrant further exploration. For example: To what extent is the U.S. Congress trying to manipulate or control European speech and rules? Should the First Amendment have extraterritorial effect? How should the First Amendment treat disinformation or misinformation? Does it extend to company decisions or just state actors? Should the EU create a carveout to ensure some modicum of protection for American free speech interests? During the next stage of inquiry, it would be beneficial to think creatively about ways to balance competing interests with a remedial approach in mind so that more than one interest may garner respect to the extent possible.

6. Conclusion

The archetypal absolutism of American free speech and expression law is under pressure. Internal pressure exists from concerns about disinformation, hate speech and threats to democracy. External pressure comes from the Brussels effect on multinational companies

potentially reaching American speakers by suppressing them to comply with EU regulations. Absolutism does not lightly abide limits on the underlying liberty-inspired rights. A remedies-centred approach could solve the puzzle by extraterritorially protecting American speakers' rights, while otherwise leaving intact compliance with EU regulations. Such remedial requests require balancing of competing interests and shaping relief to show comity. Achieving this delicate balance may not always be attainable, but it is a goal well worth pursuing.

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Tracing an Unfinished Arc: Gaps, Challenges and Digital Transformations in the EU Administration

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Abstract: This study examines the development of the European Administrative Space through cooperation understood both as a constitutional principle and as a system of everyday inter-authority relations. It argues that EU law is implemented through a multi-level, networked administrative structure combining direct and indirect forms of public administration, in which composite administrative procedures play a central role. Using a theoretical and doctrinal methodology, the article analyses the structural features of these procedures and identifies persistent gaps in legal remedies that pose risks to the rule of law. Particular attention is paid to the impact of digitalisation, showing how interoperability and automation simultaneously enhance administrative efficiency while introducing new forms of procedural uncertainty. The study presents European administrative cooperation as an evolving but still incomplete legal and institutional framework.

Keywords: loyal cooperation, European Administrative Space, composite procedure, judicial review, digitalisation

1. Introduction

For more than half a century, European integration has been a defining force in shaping the legal systems of European states and, in an unprecedented manner, transforming their public administrations into a multi-level structure of cooperation. This transformation has occurred despite the absence of an explicit mandate for the full harmonisation of administrative or procedural law, and even though the European Union (EU), as a *sui generis* entity, lacks a uniform, codified legal framework governing these fields. Yet, developments over recent decades have produced a complex, multi-layered administrative system in which it is no longer merely possible, but both justified and necessary, to

speak of European administrative and procedural law as autonomous constructs with their own specific content and characteristics.

A central driving force behind the everyday functioning of integration is cooperation as a fundamental constitutional and organisational principle. The principle of loyal cooperation not only structures the relationship between EU institutions and the Member States, but also permeates administrative practice at multiple levels. The exchange of information between national authorities and EU bodies, mutual assistance, joint controls, and cross-border administration have become routine features of governance. Despite their ordinary appearance, these practices are essential to the realisation of the objectives of integration. It is through such practical, day-to-day cooperation that the effective enforcement of EU law is rendered tangible and that the contours of a distinct European administrative space gradually emerge.

Just as the EU itself is a unique and evolving construct, EU law follows a distinctive, and still unfinished path of development. This study seeks to trace that development as an open-ended trajectory rather than a completed system, from its constitutional foundations through the institutional and judicial forms of composite procedures to the coordination challenges and accountability risks of the digital age, focusing on joint procedures with international elements and cooperation between Member State authorities and EU institutions, features inherent in a borderless European area. While digitalisation has enhanced data sharing and coordination, it has also introduced opaque layers into an already multi-level system. Increasingly, decision-making is mediated by digital infrastructures, such as interoperable databases and automated systems, which not only support but also structure administrative action by shaping how information is produced and validated. These infrastructures can thus function as *de facto* normative frameworks influencing outcomes beyond formal legal rules (Hildebrandt, 2015, pp. 135–150; Hofmann, 2024, pp. 4–5; Smuha, 2025, pp. 2–3). Composite procedures should therefore be understood as interactions not only between authorities, but also between legal norms and informational architectures, making digitalisation a constitutive element of the European administrative space. Against this background, the article asks to what extent composite procedures ensure effective judicial protection, and how digitalisation reshapes the structural conditions of administrative legality. Methodologically, it combines doctrinal analysis with a conceptual examination of administrative cooperation and digitalisation, supported by selected Court of Justice of the European Union (CJEU) case law and examples from different policy areas.

2. Cooperation as a constitutional principle of the European Administrative Space

The European Administrative Space may be understood as an increasingly integrated and coordinated system of public administration operating across both EU and national levels. It reflects a process of partial de-territorialisation of administrative power and the emergence of a networked governance model, characterised not only by institutional interdependence but also by shared principles of good administration, including legality,

transparency, accountability, and effectiveness (OECD, 2023). In the history of European integration, issues of administrative law were not on the agenda for a long time. The institutional system of integration was examined within a general public law framework, and the implementation of the *acquis* was regarded as a matter of the internal affairs of the Member States, in line with the practice of international organisations. The only difference lay in the method of implementation, which was shaped by the role of judicial decisions in sanctioning specific cases and, more broadly, in interpreting the law. This approach changed with the challenges of the Eastern enlargement, owing to the need for administrative convergence (OECD, 2023, pp. 6–9). The programmes developed at that time are still in operation today (Soós, 2011, p. 152). At the same time, this process led to the emergence of the concepts of the European Administrative Space and European administrative law, and to their entry into public consciousness (Hofmann, 2008, p. 663). In essence, however, the underlying public law construct has remained unchanged.

The EU administration has always been fundamentally divided, with a clear distinction in terms of composition, tasks, and powers between direct administration, carried out by EU institutions and bodies, and indirect administration, exercised by the authorities of the Member States. Although the indirect level is the designated executor of EU law, examples of direct EU administration can be found in areas such as competition law enforcement (where the European Commission adopts binding decisions on antitrust and merger control), state aid control, and the management of certain EU funding programmes, where EU bodies directly interact with beneficiaries and adopt administrative acts with legal effect (Craig, 2018, pp. 25–35; Schmidt-Aßmann, 2019, para. 8).

These two levels have operated in parallel from the outset, but with the deepening of integration and the expansion of EU policies, they have become increasingly interconnected within a two level, yet integrated, system of implementation (Ibáñez, 1999; Torma, 2011, pp. 196–197; Boros, 2018, [1]–[2]; Balázs, 2015, p. 22; Balázs, 2020, p. 80; Harlow & Rawlings, 2014, p. 5). Neither level can replace the other, but both are obliged to cooperate. Primary responsibility for the implementation of EU law, therefore, lies with the public administrations of the Member States. EU administrative procedure, understood as a legally regulated process, is relatively easy to define; however, its content is as diverse as the organisational systems of the EU and the Member States themselves. Both levels possess their own procedural law, with internal and external dimensions, but a comprehensive, codified procedural framework exists only in legal scholarship (Craig et al., 2017).

At the same time, European public administration includes a specific connecting layer: the sphere of horizontal and vertical cooperation between authorities, which blurs the boundary between the direct and indirect levels of administration (Hofmann & Türk, 2007, p. 270). This layer is increasingly supported by IT systems, including shared databases, continuous information exchange, and network-based cooperation channels. It typically operates outside national jurisdiction, and the diversity of EU law applicable in this field reflects the differing integration histories and jurisdictional relationships of individual policy areas. At the level of direct EU administration, regulatory powers have so far been relatively limited (Craig et al., 2017; Deviatnikovaitė, 2018, p. 30). However,

digitalisation may lead to a reversal of the existing balance between the two administrative levels concerning certain administrative tasks (Csatlós, 2024a, pp. 329–331).

The principle of cooperation is as old as integration itself (Negruț & Zorzoană, 2023, p. 431).¹ According to classical Westphalian logic, implementation has always been the primary responsibility of the Member States, but this has been accompanied by a mutual obligation to cooperate. Member States and EU institutions are required to assist one another in the performance of their Treaty-based tasks, with mutual respect. Loyal cooperation is now a constitutional principle, which requires Member States and EU institutions to assist each other in fulfilling their obligations under the Treaties in a spirit of mutual respect.² The cooperation mechanism is therefore not merely a matter of formal coordination, but one of the cornerstones of effective integration.

Under the loyalty clause, Member States must take all appropriate measures to fulfil their obligations under EU law, including both active cooperation and the duty to refrain from actions that could jeopardise Union objectives. This responsibility extends not only to administrative authorities but also to national courts, which ensure the effective enforcement of EU law within a framework often described as functional procedural autonomy. While substantive rights may derive directly from EU law, procedural rules generally remain governed by national law in the absence of EU provisions (Gombos, 2019, p. 37). That autonomy is nevertheless limited by EU law requirements such as primacy, equivalence and effectiveness, rendering it ultimately functional in nature (Galetta, 2010, p. 123; Halberstam, 2021, p. 147).

The principle of cooperation thus operates not merely as a legal rule but as a constitutional principle structuring the relationships between the EU and its Member States, as well as among EU institutions, and ensuring the performance of common tasks within an increasingly interdependent system. At the same time, despite procedural autonomy, EU law directly shapes administrative procedures in several fields, notably customs and taxation, as well as agricultural and environmental policy, where detailed EU frameworks significantly influence national administrative processes.

3. From ‘close cooperation’ to administrative networks

Due to the borderless nature of Europe and the cross-border character of many policy areas, effective governance increasingly depends on close, day-to-day cooperation between administrative authorities. In this context, new forms of administrative cooperation have emerged, particularly within the Area of Freedom, Security and Justice (AFSJ), including joint operational “teams” composed of representatives from Member States and EU bodies. These operate in areas such as cross-border criminal investigations, migration management and border control, for example through joint investigation teams coordinated by Eurojust and Europol, as well as operational deployments

¹ It can be traced back to Article 5 of the former Treaty of Rome, see *Traité instituant la Communauté économique européenne*. Rome, 25 mars 1957.

² Article 4(3) of the Consolidated version of the Treaty on European Union (TEU). OJ C 326, 26.10.2012, pp. 1–46.

coordinated by Frontex (Korontzis, 2024, pp. 258–269; Gandhi, 2024, pp. 2–4; Inshakova et al., 2020).

These hybrid structures, situated at the interface between EU and national competences, exemplify the increasing operationalisation of the European administrative space, while also raising challenges relating to fundamental rights protection, liability, procedural guarantees, and judicial review in a multi-level setting. More broadly, such hybrid administrative models have developed across EU policy areas, combining direct and indirect elements to varying degrees. The extent of Europeanisation varies depending on the Union's competences, the role of subsidiarity, and the historical development of each policy field (Lenschow, 2006, pp. 67–68). At the same time, there has been no intention to unify national administrative systems in a way that would override their historical traditions and institutional specificities.

As a general rule, the application of EU law falls within the responsibility of the authorities of the Member States. Where these authorities act within the framework of administrative procedures under domestic law, their legal acts are subject to review by national courts, which may refer questions to the Court of Justice of the European Union (CJEU) for a preliminary ruling. In a limited number of areas, generally those falling within the exclusive competence of the EU, EU law is applied directly through administrative action and implemented by EU institutions, bodies or agencies, which conduct their proceedings under the supervision of the General Court and the Court of Justice. However, as integration has deepened, there has been a growing number of cases in which EU law is applied through proceedings involving both EU and Member State institutions, bodies or agencies (Campos Sánchez-Bordona, 2018, paras. 57–58).

The practical implementation of the four freedoms, therefore, typically gives rise to cases with an international element, resulting in complex (composite) procedures. In this context, cooperation means that the decision of the competent authority of one Member State is based on data or procedural acts carried out by another Member State. Decisions resulting from composite procedures are thus produced through the collaboration of authorities operating under different jurisdictions. Cooperation involving procedural acts spanning multiple jurisdictions requires clearly defined powers and responsibilities in order to ensure transparency, accountability, and compliance with guarantees of fair procedure. As actors have become increasingly interdependent in the implementation of EU policies, cooperation functions as a bridge between the preservation of national legal traditions and the need for the uniform application of EU law, thereby contributing to the creation of a relatively coherent European area of freedom, security and justice.

Cooperation is, therefore, not merely political but also operational in nature: it functions at the level of everyday administrative practice (della Cananea, 2004, p. 197), with the courts of the Member States contributing through their legal protection function (Benvenisti & Downs, 2014, p. 86). As a consequence of the *sui generis* EU legal order, the responsible Member State authorities are effectively organised into networks in pursuit of EU objectives.

Administrative cooperation has existed since the earliest stages of integration, and virtually every legal act contains some form of authorisation for cooperation aimed at achieving the four freedoms (Lafarge, 2024, p. 145). Cooperation is not only desirable

but also a requirement arising from the institutional structure of the EU. Nevertheless, the establishment of the EU marked a turning point in the institutionalisation of cooperation. Until the 1990s, cooperation between administrative and judicial authorities took place on an intergovernmental basis, using instruments outside the framework of integration, and was limited to a narrow range of areas, primarily criminal matters (Monar, 2012, pp. 718–721).

The Maastricht Treaty opened a new chapter by bringing cooperation in judicial and home affairs within a formal EU framework, although it retained an intergovernmental character (Monar, 2014, p. 150). The Amsterdam Treaty and the Tampere Programme constituted a further milestone by launching the concept of a European area based on freedom, security and justice (Kostakopoulou, 2020, p. 24), thereby paving the way for a form of cooperation for which the Treaty of Lisbon later provided a firm legal basis, particularly through the establishment of the principles of mutual trust and mutual recognition (Chevallier-Govers, 2021, pp. 1352–1358).

Since the 2000s, a distinct system of administrative networking has emerged, displaying common features across policy areas. It has developed in response to concrete needs, operates in line with the degree of Europeanisation of the policy concerned, and pursues a shared objective: implementation in accordance with EU law. This system is fundamentally based on information sharing (Lafarge, 2024, pp. 154–155). A pioneering development in this regard was the creation of trans-European networks enabling electronic data exchange (IDA) between administrative systems (Oller Rubert & García Macho, 2021, p. 1421).

The Internal Market Information System (IMI), in operation since 2008, has also played a central role. IMI facilitates information exchange and cooperation between Member States through a central communication platform, thereby supporting the application of EU law in internal market cases with an international dimension.³ It does so by means of pre-translated language templates and machine translation (Lottini, 2014, p. 111). IMI provides a platform for mechanisms supporting day-to-day cooperation between authorities in an expanding range of legal fields, including the verification of the authenticity of commonly used public documents, the operation of the internal market problem-solving network, and procedures for the recognition of professional qualifications. By 2023, it had facilitated 95 types of administrative cooperation and enabled approximately 585,000 exchanges of information (European Commission, 2023).

The culmination of this expanding framework of cooperation is the composite procedure, which represents the most complex form of interconnection between the EU

³ Decision No 1719/1999/EC of the European Parliament and of the Council of 12 July 1999 on guidelines for trans-European networks for electronic data interchange between public administrations (IDA), including the identification of projects of common interest. OJ L 203, 3.8.1999, pp. 1–8 (no longer in force); Regulation (EU) No 1024/2012; 2008/49/EC: Commission Decision of 12 December 2007 concerning the implementation of the Internal Market Information System (IMI) as regards the protection of personal data. OJ L 13, 16.1.2008, pp. 18–23 (no longer in force); Regulation (EU) No 1024/2012 of the European Parliament and of the Council of 25 October 2012 on administrative cooperation through the Internal Market Information System and repealing Commission Decision 2008/49/EC (‘the IMI Regulation’) OJ L 316, pp. 1–11.

and national administrative levels. Therefore, one of the central issues of judicial control is the determination of jurisdiction. The traditional model of administrative law is based on the premise that the legality of a given administrative act is reviewed by the courts of the state whose authority issued the act. In composite procedures, however, decision-making is functionally divided across multiple jurisdictions, while the legal effects are often realised in a single final act of an authority. This results in a separation between the review of legality and the actual locus of decision-making.

4. The structural deepening of EU administrative cooperation and the genesis of composite procedures

The implementation of EU policies, therefore, relies on the administrative bodies of the Member States, a reliance that necessarily entails continuous, day-to-day cooperation between them. As integration has progressed, these relationships have become increasingly organised, formalised and structured: spontaneous cooperation between authorities has gradually become institutionalised, giving rise to so-called administrative networks. These are multi-centred cooperation structures in which EU and national authorities, as well as authorities across Member States, implement legislation in a coordinated manner, share data, and align their decisions, thereby forming a network-like system.

The objective of these networks is to enhance the efficiency and professional quality of policy implementation and to ensure continuous communication and information flows between different national administrative systems. In a broad sense, such arrangements give rise to complex procedures in which the acting authority adopts a decision that incorporates elements originating from an authority in another Member State. EU law does not regulate this phenomenon in general terms (Campos Sánchez-Bordona, 2018, para. 58), although it has been widely examined in legal scholarship (Wilbrandt-Gotowicz, 2023, p. 296).

4.1. Structural interdependence of network enforcement

Although the EU legislator still lacks direct competence to regulate or harmonise the public administrations of the Member States, this does not mean that national public administrations remain unaffected by EU requirements. The Treaty of Lisbon codified the long-recognised fact that the effective implementation of EU law at Member State level is indispensable to the proper functioning of the EU,⁴ thereby conferring a competence to promote coordination and cooperation, including through support for information exchange.

⁴ Article 197 of Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union. OJ C 202, 7.6.2016, pp. 47–388.

Administrative networks play a central role in this system: in many policy areas, EU authorities have established joint databases for the collection and exchange of information (Galetta, 2019). The forms of cooperation are highly diverse, ranging from the exchange of best practices and *ad hoc* information sharing to requests for legal assistance, systematic data exchange, and even transnational administrative decisions (Lafarge, 2024, pp. 148–152; Csatlós, 2016, pp. 20–22). These networks facilitate the allocation of cases, support coordination between jurisdictions, and often rely on secure IT systems to protect sensitive data. Moreover, they perform not only operational but also political and coordinative functions: through soft law instruments and good practices, they embed the principle of loyal cooperation in everyday administrative activity and informally fill gaps in legislation.

Over time, however, the interpretation of fundamental rights, including procedural guarantees, has also evolved. With the EU Charter of Fundamental Rights acquiring the status of primary law, rights that were previously rooted primarily in national legal orders have gained a common EU interpretation.

The principle of good administration must now be understood at the EU level, with tangible effects on the functioning of Member State administrations, particularly within the context of network cooperation. The right of access to documents, the effectiveness of procedural remedies, and the independence of authorities are concepts which, as interpreted by the CJEU, are increasingly incorporated into Member State law as shared EU standards (Halberstam, 2021, pp. 143, 156–157).

In this respect, EU law operates as a meta-norm (Roeben, 2020, p. 30), shaping national public administrations in areas where the EU lacks explicit legislative competence, and thereby producing a form of implicit administrative harmonisation. At the same time, this development exposes the fact that administrative networks often operate without a clear and predictable normative framework capable of providing unambiguous procedural rules at the intersection of different legal systems.

Within the EU legal order, there is an increasing number of administrative mechanisms in which several levels, EU and national, and the administrative bodies of several states act as part of a single procedural chain. These mechanisms are referred to in the literature as composite administrative procedures (Türk, 2025, pp. 3–4). This phenomenon is not codified in either primary or secondary EU law but has emerged from practical developments, in particular from the progressively closer coordination of EU policy implementation.

Composite procedures are intended to render the implementation of EU rules more efficient, faster, and more professionally sound. At the same time, however, they involve multiple legal systems and layers of supervision, posing serious challenges in terms of procedural guarantees and judicial protection. Complex or composite administrative procedures thus reveal significant shortcomings concerning three core rule-of-law requirements: effective judicial protection of individuals, judicial review of national public authorities, and the principle of administrative legality (Brito Bastos, 2020, p. 65).

Even well-functioning networks cannot entirely overcome differences in administrative capacity, divergent national procedural rules, or institutional asymmetries. The cooperation phase of complex procedures is particularly sensitive. Where it is based

on soft law instruments, their non-binding nature may generate legal uncertainty, restrict the possibilities of judicial review, and jeopardise transparency, accountability, legal certainty, and the effective enforcement of individual procedural rights.

The intermediate stages of cooperative procedures, during which authorities consult and exchange information, are often decisive for the outcome, especially from the perspective of those concerned. The legality of the procedure and the protection of procedural rights form the foundation of the right to be heard and to defend oneself, a consideration of particular importance in cross-border cases where different legal systems and legal cultures intersect. These structural weaknesses have repeatedly given rise to calls for the codification of European administrative procedural law. Academic initiatives, including those of the ReNEUAL network, have developed detailed proposals in this regard (Craig et al., 2017; Balogh-Békési et al., 2017, p. 23), with a particular focus on the regulation of information exchange and the recurring problems associated with composite procedures.

Both the academic literature and the case law of the CJEU distinguish between three basic types of composite administrative procedures, depending on which authority adopts the final decision and on the relationship between the participating bodies. In vertical composite procedures, a national authority prepares and examines the case, while the final decision is taken by an EU institution; decision-making power thus lies at the EU level.

This model can be observed, for example, in certain drug authorisation procedures (Röttger-Wirtz & Eliantonio, 2019, pp. 397–402) and in procedures relating to the prudential supervision of credit institutions (Budinska, 2019, pp. 176–178). In horizontal composite procedures, cooperation takes place between authorities of different Member States, while the final decision is adopted by a national body; decision-making power therefore remains at the national level. The authority vested with final decision-making power in a composite administrative procedure also determines the applicable rules of judicial review.

As a general, though not exclusive, rule, national courts review the legality of administrative acts adopted by national authorities where those authorities take the final decision, whereas the CJEU reviews administrative acts adopted by EU institutions that conclude composite procedures (Campos Sánchez-Bordona, 2018, para. 60). A mixed (or hybrid) composite procedure is one in which both the preparatory phase and the final decision-making take place at multiple levels, with successive acts building upon one another. Such procedures are characterised by shared competences and complex systems of legal remedies, which depend on where final decision-making authority lies and on the role played by the other bodies involved (Eliantonio, 2014, pp. 74–77).

4.2. Systemic risks in composite procedures

Composite procedures are designed to ensure the effective and professionally sound implementation of EU policies. At the same time, however, they raise significant rule-of-law concerns, in particular with regard to the judicial protection of individuals and the reviewability of administrative decisions (Röttger-Wirtz & Eliantonio, 2019, p. 394).

While close cooperation within the integrated administrative system is steadily deepening, the corresponding mechanisms of judicial control have not developed at the same pace (Mazzotti & Eliantonio, 2020, p. 42), falling short of the requirements of subjective and objective legal protection inherent in the rule of law (Siket, 2017, pp. 33–36), and of the standards that the EU itself demands (Rozsnyai, 2013, pp. 123–124).

The requirement of effective legal protection in the EU legal order extends beyond the mere possibility of remedying an individual rights infringement. It encompasses a set of structural guarantees designed to ensure that the legal entity concerned has access to a substantive, timely, and practically enforceable remedy. According to the case law of the CJEU, effective legal protection entails not only the enforceability of procedural rights and transparency in decision-making, but also the ability of the reviewing forum to fully assess the legality of the contested administrative act (Gerencsér, 2023, pp. 84–85).⁵

Accordingly, the requirement applies not only to the existence of a procedure, but also to its quality and efficiency, a concern that is particularly salient in the context of multi-level, collaborative administrative decision-making. In composite administrative procedures, the individual decision-making elements often do not constitute final acts with direct legal effect; yet collectively, they determine the legal position of the affected entity. This fragmented structure functions as a ‘stress test’ for legal protection, highlighting points where traditional redress mechanisms, relying on the clear identification of both the decision and the decision-maker, may fail. The CJEU has addressed these shortcomings in individual cases, but only on an ad hoc basis, without providing a coherent systemic solution.

According to settled case law, in vertical composite procedures where the final decision is adopted by an EU institution exercising direct administrative authority, the entire procedure, including preparatory or data-collection acts carried out by national authorities, falls within the exclusive jurisdiction of the CJEU. This principle was established in the *Borelli* and *Fininvest* cases.

In *Borelli* (1992), a company applied for financial support under the common agricultural policy. The application was examined within a composite procedure in which the competent Italian authority issued a negative preliminary opinion that bound the Commission and led to the rejection of the application. The applicant challenged the Commission’s decision before the CJEU, arguing that the national preparatory act was unlawful and that the EU decision based upon it should therefore also be annulled. The CJEU has held that, in composite (or complex) procedures where a national authority adopts a preparatory act that is binding on an EU institution and leaves it no margin of discretion, EU courts cannot review the final EU decision on the ground that it is based on an unlawful national measure.

This limitation highlights broader concerns related to accountability in multi-level administration and suggests that the data life cycle within such procedures requires closer scrutiny (Kaufmann & Leese, 2021, pp. 75–81). Since EU courts lack jurisdiction to review national acts, they cannot declare the EU decision invalid on that basis either. To

⁵ Judgment of 15 May 1986, *Johnston v. Chief Constable of the Royal Ulster Constabulary*, C-222/84, EU:C:1986:206, paras. 2 and 6; Judgment of 13 March 2007, *Unibet (London) Ltd and Unibet (International) Ltd v. Justitiekanslern*, C-432/05, EU:C:2007:163, paras. 79–80.

prevent a denial of effective judicial protection, however, the CJEU held that national courts must be able to review binding national preparatory acts under the same conditions as they would review a final act adopted by the national authority concerned.⁶

This approach has largely remained unchanged. In the context of the prudential supervision of credit institutions, notifications of qualifying holdings must be submitted to the national competent authority, which assesses the proposed acquisition and issues a recommendation to the European Central Bank (ECB). The ECB then decides whether to oppose the acquisition on the basis of the assessment criteria laid down in EU law.

In *Fininvest*, the Italian Central Bank submitted a negative recommendation to the ECB concerning Berlusconi's application, on the grounds that he did not satisfy the requirement of good repute owing to his disqualification from managing a company. The ECB followed the recommendation and rejected the application. Although the decision was challenged before an Italian court, the CJEU ruled, in preliminary ruling proceedings, that since the final decision was attributable to the ECB, exclusive jurisdiction to review it lay with the EU courts under Article 263 TFEU. In order to safeguard the effectiveness of EU law and the principle of sincere cooperation, the CJEU further held that acts adopted by national authorities in procedures such as those in *Fininvest* cannot be reviewed by national courts. Instead, EU courts may, where necessary, declare the ECB's decision indirectly unlawful if its illegality can be traced back to the unlawfulness of national preparatory acts.⁷

This solution may offer pragmatic advantages in terms of legal harmonisation at the EU level and the uniformity of decision-making (Lonardo, 2022; Eckes & D'Ambrosio, 2020, pp. 43–44). At the same time, it entails serious drawbacks. Where a violation of law occurs at the national level, it may escape substantive judicial scrutiny, since EU courts cannot examine compliance with national law (Brito Bastos, 2020, p. 64).

This problem is illustrated by the *Rimšēvičs* judgment, which concerned issues characteristic of vertical composite procedures. In that case, Latvian authorities temporarily suspended the President of the Latvian Central Bank, Rimšēvičs, in the context of a corruption investigation, thereby also depriving him of his seat on the Governing Council of the ECB.

Both *Rimšēvičs* and the ECB challenged the suspension before the CJEU, relying on the Statute of the European System of Central Banks and of the ECB, which provides that governors of national central banks may be removed from office only if they no longer fulfil the conditions required for the performance of their duties or have been guilty of serious misconduct. The CJEU annulled the suspension decision, finding that it was not sufficiently substantiated by evidence of serious misconduct. However, its assessment was based solely on the national documents submitted to it, which failed to demonstrate such

⁶ Judgment of 3 December 1992, *Oleificio Borelli SpA v. Commission of the European Communities*, C-97/91, EU:C:1992:491, paras. 1–4.

⁷ Judgment of 19 December 2018 *Silvio Berlusconi and Finanziaria d'investimento Fininvest SpA (Fininvest) v. Banca d'Italia and IVASS*, C-219/17, EU:C:2018:1023, paras. 53–59.

a breach of duty. The CJEU did not examine the legality of the national proceedings or the legal basis of the documents themselves.⁸

This case illustrates how legal remedies relating to national acts may fall outside the unity of the procedure, thereby undermining the effective protection of rights.⁹ Legal scholarship has accordingly warned that certain administrative acts may remain entirely outside judicial review, calling into question the legitimacy of the EU administrative space (Brito Bastos, 2020).

These tensions are further illustrated by horizontal composite procedures, notably in the *Berlioz* case. There, the tax authority of one Member State imposed an administrative financial penalty on a taxpayer for failing to comply with a cooperation obligation arising from a decision requiring the provision of information requested by another Member State. The CJEU interpreted the right to an effective remedy as requiring that a court hearing an action against such a penalty must be able to review the legality of the underlying decision requiring the provision of information. However, in light of the composite nature of the procedure and the objectives of EU cooperation rules, the review was limited. The national court was required only to verify, based on a summary examination, whether the request for information established a sufficient link between the information sought, the person concerned, any third parties involved, and the tax objective pursued. Unlawfulness could be established only where the discrepancy between the request and the objective of cooperation was manifest.¹⁰

The effectiveness of judicial protection under Article 47 of the Charter further requires that the requesting authority provide sufficient reasoning to enable the national court to assess the legality of the request for information.¹¹ While this marked the emergence of a first structured framework for transnational judicial review (Mazzotti & Eliantonio, 2020, p. 47), it also made clear that such review remains limited to assessing manifest irrelevance, rather than examining the full legality of the earlier national stage.

In *Berlioz*, the CJEU thus departed from the earlier doctrine that foreign national preparatory acts were entirely immune from national judicial review. Yet only a year later, in *Donnellan*, it ruled that where an authority of one Member State requests another Member State to recover a fine of which the person concerned had been unaware, the requested authority may lawfully refuse assistance.¹² In this way, the requested State effectively exercises a form of review over the proceedings of the requesting State.

Overall, the deepening of EU administrative integration and the expanding role of EU institutions significantly reshape the conditions under which fair, transparent and lawful procedures, as well as effective judicial protection, can be ensured. In this context,

⁸ Judgment of 26 February 2019, *Ilmārs Rimšēvičs v. Republic of Latvia*; *European Central Bank v. Republic of Latvia*, C-202/18 and C-238/18, EU:C:2019:139, para. 96.

⁹ Article 47 of Charter of Fundamental Rights of the European Union (Charter of Fundamental Rights). OJ C 202, 7.6.2016, pp. 389–405.

¹⁰ Judgment of 16 May 2017, *Berlioz Investment Fund SA v. Directeur de l'administration des contributions directes*, C-682/15, EU:C:2017:373, paras. 77–78.

¹¹ Judgment of *Berlioz*, para. 84; Judgment of 4 June 2013, *ZZ v. Secretary of State for the Home Department*, C-300/11, EU:C:2013:363, para. 53; Judgment of 23 October 2014, *Unitrading Ltd v. Staatssecretaris van Financiën*, C-437/13, EU:C:2014:2318, para. 20.

¹² Judgment of 26 April 2018, *Eamonn Donnellan v. The Revenue Commissioners*, C-34/17, EU:C:2018:16, para. 61.

composite procedures, if not accompanied by effective and substantive judicial review, risk undermining legal certainty and normative stability. The case law of the CJEU, particularly in *Borelli*, *Berlioz*, *Fininvest*, *Rimšėvičs* and *Donnellan*, has progressively outlined the contours of judicial review in such procedures. However, these rulings tend to provide case-specific solutions rather than a coherent and general doctrine for the review of multi-level administrative decision-making, which remains a major challenge for the contemporary EU administrative system.

Composite administrative procedures are therefore not merely technical tools of cooperation but raise structural questions for the classical model of jurisdiction and judicial control. Their multi-level nature often separates the source of illegality, the place of decision-making, and the forum of judicial review across different legal orders. This fragmentation calls into question the traditional state-centred logic of administrative jurisdiction, particularly in light of the EU requirement of effective judicial protection. In this sense, composite procedures function as a stress test for the European administrative space: they reveal the extent to which legality and judicial protection can be maintained within a system of multi-level governance. Their presence across diverse policy areas, including financial supervision, migration, taxation, environmental regulation and internal market governance, confirms that composite administration is not exceptional, but a general structural feature of EU governance.

5. Digital paradox: Standardisation and fragmentation in the European Administrative Space

5.1. From e-procedures to structuring digitalisation

The development of composite administrative procedures has been closely linked to the use of information technologies from an early stage. Data exchange between authorities, the transmission of information and the coordination of administrative cooperation have typically taken place through electronic channels. These early e-procedures, however, primarily reflected an instrumental form of digitalisation, aimed at accelerating information flows, reducing administrative burdens and providing technical support for network-based cooperation. At that stage, the fundamental logic of decision-making, the allocation of responsibilities and the procedural structure largely remained unchanged (Wall, 2016, pp. 11–12).

A prominent example of this development is the Single Digital Gateway established by Regulation (EU) 2018/1724, which provides a common EU “one-stop-shop” portal enabling citizens and businesses to access information, complete administrative procedures, and obtain assistance services across Member States in an integrated digital environment (Bhattarai et al., 2019, pp. 160–161; Graux, 2021, pp. 88–89, 102). By contrast, the current wave of digitalisation represents a qualitative shift.

Legal interoperability, understood as facilitating interaction between administrative authorities operating under different jurisdictions in the performance of administrative tasks, is now complemented by organisational, technical and semantic interoperability (Pflücke, 2024, p. 270; Inshakova et al., 2020, pp. 447–450). Digitalisation thus no longer merely serves as a carrier of administrative action but has become a structuring factor of decision-making itself.

Interoperable databases, automated workflows, algorithmic pre-screening and AI-based decision support systems are increasingly embedded in the internal functioning of composite procedures. As a result, certain procedural stages are not only accelerated but reorganised, and often rendered invisible to the individuals concerned. This transformation also affects the *locus* of normative authority in administrative governance. While administrative legality has traditionally been grounded in formal legal norms (Hofmann, 2024, p. 4), contemporary decision-making increasingly depends on infrastructures of identification, data exchange, and algorithmic processing that define the operational conditions of administrative action. Where interoperable systems or automated decision support tools determine which data are considered relevant, how they are processed, and which outcomes are prioritised, the normative environment of governance is partially relocated from legal texts to data architectures (Nouws & Dobbe, 2024, p. 190). This shift raises fundamental questions concerning accountability, transparency and legality, as the rules embedded in digital systems may remain opaque, difficult to contest, and only indirectly subject to judicial review.

Data processing and decision support mechanisms operating within digital systems further reinforce those structural characteristics that have already made legality review difficult: the fragmentation of decision-making chains, the informal nature of preparatory acts and the blurring of responsibility. Where a final administrative decision is based on algorithmically generated assessments or on data automatically retrieved from the digital system of another Member State, the source of a potential infringement becomes even harder to identify, and the object of judicial review increasingly difficult to delineate.

Digitalisation also creates an asymmetrical informational relationship between authorities and affected individuals. While digital cooperation functions as a tool of integration and efficiency for administrative networks, it often results, from the individual's perspective, in an opaque, "black box" procedural environment, which is particularly problematic in light of the rights to a fair procedure and to effective judicial protection (Brožek et al., 2024, pp. 434–435).

The 2020s mark the decade of a human-centred digital transition, to which the EU's policy objectives have also been recalibrated. As part of this strategy, the full online availability of public services by 2030 has been set as a target,¹³ alongside the establishment of faster, more transparent, data-driven and interoperable administrative functioning (Vörös, 2025, p. 40; Patyi et al., 2025a, p. 7). This shift renders cross-border cooperation a natural process and necessarily reshapes the operation of European public administration.

¹³ COM/2021/118 final. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions 2030 Digital Compass: the European way for the Digital Decade; Decision (EU) 2022/2481 of the European Parliament and of the Council of 14 December 2022 establishing the Digital Decade Policy Programme 2030. OJ L 323, 19 December 2022, pp. 4–26.

In this sense, the digital transition is not merely a matter of technical modernisation but entails a structural and conceptual transformation. Cooperation between national administrative authorities is no longer exclusively a legal issue but increasingly a technological and data-strategic one, shaped by the interplay of interoperability, automation and data transfer.

Digitalisation, therefore, appears in composite procedures not as an isolated development but as a new quality of cooperation, one that also amplifies previously identified structural uncertainties. Its tangible foundations are already evident in EU digital strategies, the Digital Services Act (DSA), the eIDAS Regulation, the AI Act, the e-Justice Communication System (e-CODEX), and the activities of eu-LISA, which operates large-scale IT systems in the area of freedom, security and justice (Csatlós, 2025, pp. 137–147; Onțanu, 2023, pp. 96–105). These developments increasingly portray public administration as an interconnected ecosystem in which continuous data flows and service integration constitute the core operational principle.

5.2. Anticipated challenges to judicial protection and normative tensions in digitalised composite procedures

In the digital era, European administrative procedural law enters a new dimension: procedures become faster yet more complex; cooperation more efficient yet more vulnerable; and legal certainty and the protection of individual rights require new forms of safeguards, among which data protection regulation plays a particularly prominent role (Patyi et al., 2025b, pp. 7–13; Váradi, 2024). At first glance, digitalisation appears to offer solutions to precisely those coordination difficulties arising from the multi-level nature of composite procedures (Benjamin, 2023, pp. 11–12); at the same time, however, it generates new rule of law challenges.

Automated data processing and pre-screening often take the form of technical operations that do not formally qualify as administrative decisions, yet have a decisive impact on the outcome of the procedure. This form of “invisible decision-making” significantly complicates the exercise of legal remedies, as it is unclear to the affected individual which act, which authority and at which level may be subject to judicial review. The problem is particularly acute where preparatory national acts are influenced by AI-based processes (Kastanas & Pavlidis, 2025, pp. 68–69), as foreshadowed, for example, by potential future litigation relating to the ETIAS system (Csatlós, 2024b, pp. 391–397; Musco Eklund, 2023, p. 272).

Digitalisation also puts procedural guarantees to the test. The duty to give reasons may become especially difficult to fulfil where decisions are based on automated risk analysis or algorithmic pre-classification, thereby jeopardising compliance with Articles 41 and 47 of the Charter. In data-driven systems, erroneous or outdated information may rapidly propagate throughout the entire procedural chain, while judicial review remains fragmented, further reinforcing the jurisdictional gap (Jančová & Fernandes, 2022, pp. 7–8). The greater the significance of a decision for an individual’s life, the greater the importance of understandable justification in the event of an adverse outcome; yet

the opposite tendency can be observed where authorities process mass cases governed by automation and algorithms, resulting in generic and schematic reasoning (Daly et al., 2023, pp. 261–262).

Technical rules embedded in digital systems, such as data quality criteria, automated deadlines and risk categories, acquire a form of implicit normative force, raising new questions of democratic legitimacy and accountability. Digitalisation, therefore, does not alleviate but, in many cases, further deepens the judicial protection problems already identified in composite procedures (Wachter et al., 2018, pp. 860–879; Lazarotto, 2025, pp. 50–51). The digital era thus represents not merely a new quality of cooperation but the next stage in the rule of law dilemmas inherent in composite administrative procedures, dilemmas that cannot be addressed through technological modernisation alone, as they require normative responses grounded in the rule of law.

This is not necessarily because normative frameworks are currently absent, but rather because the normative background itself remains fragmented, dispersed across different sources of law, thereby hindering coherent interpretation and application. Accordingly, several directions appear justified to strengthen judicial protection. EU and national authorities should be obliged to provide affected individuals with accessible and comprehensible information on the functioning of digital systems used in composite procedures, particularly concerning data sources, automated assessment steps and decision-support mechanisms (a duty of digital transparency).

At a normative level, it should be explicitly recognised that automated or digitally mediated preparatory acts, where they substantively influence the final decision, form part of legality review and cannot be entirely excluded from judicial control. This objective is further served by clearly establishing responsibility chains, first at the normative level and subsequently in individual decisions. In the digital environment of composite procedures, clear rules are required to determine which authority bears responsibility for data quality, algorithmic processing and the lawfulness of the final decision. Without such clarification, judicial protection risks becoming illusory, particularly where courts are not granted access to the functioning of digital systems, including the reviewability of algorithmic decision-support. In such cases, the legality review would become merely formalistic.

The use of digital systems in composite administrative procedures is not only a matter of efficiency, but also raises new challenges from the perspective of the rule of law and effective judicial protection. To address this, it would be necessary to establish an explicit normative obligation of digital transparency.

Within this framework, both EU and Member State authorities should be required to provide those concerned with accessible and comprehensible information about the functioning of the digital systems used in composite procedures. Such information cannot be limited to merely indicating the existence of the system, but must extend at least to the types of data sources used, the nature of automated evaluation or ranking steps, and the manner in which digital tools contribute to the preparation of the final decision. The purpose of this information is not the full disclosure of algorithms, but rather to ensure that those concerned can understand the role digital tools play in shaping the decision taken in their case.

In this context, it would also be necessary to clearly state at the normative level that automated or digitally mediated preparatory acts, where they materially influence the final decision, fall within the scope of legality review. In current practice, such steps are often classified as merely technical in nature, with the result that judicial control is essentially limited to the final decision. However, in the case of digital decision support systems, automated evaluation mechanisms applied at the preparatory stage may in fact determine the range of decision-making alternatives or their ranking. If these steps fall entirely outside the scope of legality review, judicial review may become substantively hollow (Cobbe & Singh, 2020, pp. 1–2; Kazim & Tomlinson, 2023, pp. 12–16).

From the perspective of practical applicability, particular importance must also be attached to the clear definition of the chain of responsibility. In the digital environment of composite procedures, clear normative rules are needed to determine which authority bears responsibility for specific functions at different stages of the procedure. This includes, in particular, responsibility for data quality (for example, the accuracy and timeliness of databases), responsibility for algorithmic processing (for example, the design and operation of automated evaluation criteria), and responsibility for the legality of the final decision. If these responsibility relationships are not clearly defined, there is a risk that those concerned will be unable to identify the authority against whose decision or procedural act they may seek legal remedy (Abdel Hamid, 2025, pp. 386–387; Bicskei, 2023, pp. 103–113).

In addition, in order to ensure effective judicial protection, it is necessary to guarantee that courts can actually access and understand the relevant elements of how digital systems operate. This may include, for example, the examinability of the operational logic of decision support algorithms, the categories of data used, or the automated evaluation steps. This does not necessarily require full public disclosure of algorithms, but rather institutional solutions, such as expert assessments or restricted judicial access, that enable courts to verify whether the functioning of the digital system complies with applicable legal requirements. In the absence of such mechanisms, legal review may become merely formal, as courts would be unable to assess the technological mechanisms that actually shape the decision meaningfully.

Overall, digitalisation in composite administrative procedures does not simply accelerate cooperation but reshapes its normative structure. If this transformation is not accompanied by a conscious rethinking of judicial protection mechanisms, the price of effective administration may be the erosion of rule of law guarantees. Digitalisation can therefore be regarded as legitimate within EU administration only insofar as it strengthens the reviewability of legality and effective judicial protection. At the same time, the EU's increasingly assertive regulatory approach in the digital domain, illustrated by instruments such as the AI Act¹⁴ and the Digital Services Act,¹⁵ has been criticised as imposing

¹⁴ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act). OJ L, 2024/1689, 12.7.2024.

¹⁵ Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market for Digital Services and amending Directive 2000/31/EC (Digital Services Act). OJ L 277, 27.10.2022, pp. 1–102.

significant compliance burdens (Graux et al., 2025, pp. 78–81; Eckardt, 2025, pp. 199–202; Hartmann et al., 2025, pp. 3629–3632; Finch & Butt, 2025, pp. 19–20).

Beyond the simple diagnosis, these structural challenges call for more explicit normative and institutional responses. First, clearer allocation of responsibility within composite procedures is required, particularly in relation to digitally mediated preparatory acts. Second, enhanced transparency obligations should be developed for digital administrative systems, ensuring that affected individuals and reviewing courts can understand the role of data and algorithms in decision-making processes. And third, the progressive development of shared procedural standards at the EU level, whether through codification initiatives or sector-specific harmonisation, could mitigate fragmentation and strengthen the effectiveness of judicial protection. These responses suggest that addressing the challenges of composite procedures in the digital age cannot rely solely on doctrinal refinement but requires a reconfiguration of the relationship between legal norms, administrative structures and technological infrastructures.

Conclusion

This study has traced the development of the European Administrative Space through the constitutional and practical significance of administrative cooperation. Its central premise has been that, despite the absence of a uniform and codified body of EU administrative procedural law, the everyday interaction of authorities has nevertheless given rise to an increasingly dense, multi-level and technologically interconnected system of administration.

The analysis has demonstrated how the principle of loyal cooperation has evolved into a structural cornerstone of EU law implementation, and how administrative networks have gradually transformed earlier forms of intergovernmental coordination into indispensable frameworks for continuous information exchange and data-driven governance. These networks no longer merely complement national administrative action, but increasingly shape the very conditions under which EU policies are applied in practice.

By examining composite procedures in detail, the study has highlighted persistent gaps in judicial protection that may jeopardise the guarantees enshrined in Articles 41 and 47 of the Charter of Fundamental Rights. The analysis of the *Borelli*, *Fininvest* and *Berlioz* cases illustrates that multi-level decision-making processes are frequently not subject to comprehensive judicial review, leaving certain procedural stages and administrative acts insufficiently scrutinised. In this respect, the study draws attention to the ambivalent role of digitalisation.

While interoperable data platforms and automated information exchange significantly enhance administrative efficiency, they also generate new risks related to transparency, data quality, accountability and access to effective legal remedies. The growing reliance on digital infrastructures and automated decision support systems within composite procedures may therefore further intensify legal uncertainty rather than resolve it.

From a practical perspective, the findings of this study suggest that strengthening judicial protection in composite procedures requires not only doctrinal clarification but

also institutional and technological adjustments. These include clearer allocation of responsibilities, enhanced transparency of digital systems, and the development of shared procedural standards at the EU level. Future research could further explore the empirical operation of composite procedures across policy fields and examine how digital infrastructures reshape accountability mechanisms in practice. Ultimately, ensuring the rule of law in the European administrative space will depend on the ability to align legal norms with the evolving realities of data-driven governance.

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Accentuating Corporate Social Responsibilities in Namibia's Sustainable Special Economic Zones

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Abstract: This paper assesses the integration of Corporate Social Responsibility (CSR) within the policy framework of Namibia's Sustainable Special Economic Zones (SSEZs). As Namibia transitions from the underperforming Export Processing Zones (EPZs) to SSEZs, the paper raises the question of whether the new policy sufficiently addresses the CSR deficiencies of its predecessor. Using a qualitative, interpretive methodology, the paper highlights significant policy and institutional gaps impeding effective CSR implementation, such as the absence of regulatory mandates, inadequate accountability mechanisms and disjointed governance. It suggests a multi-tiered intervention strategy comprising policy reforms, legal requirements and participatory governance mechanisms, to integrate CSR into the SSEZs design and operations. Drawing on international best practices, the paper presents a contextualised framework to improve social sustainability within Namibia's industrial policy. The results emphasise the need to reconceptualise CSR as a fundamental and strategic component of sustainable economic development.

Keywords: corporate social responsibility, sustainable special economic zones, development, governance, Namibia

1. Introduction

The global shift toward sustainable development has highlighted the role of Corporate Social Responsibility (CSR) in shaping inclusive, environmentally conscious economic growth models (ElAlfy et al., 2020; Ashurov et al., 2024). In this context, Special Economic Zones (SEZs) have emerged as key policy tools to drive industrialisation, attract foreign direct investment (FDI) and enhance export competitiveness. Responding to these opportunities, Namibia introduced the National Policy on Sustainable Special Economic Zones (SSEZs) in 2022, replacing the earlier Export Processing Zones (EPZs) regime established in 1995 (Republic of Namibia, 1995).

The SSEZs policy aligns with Namibia's Vision 2030 and the UN Sustainable Development Goals (Republic of Namibia, 2022). The policy establishes geographically designated SSEZs offering both fiscal incentives (e.g. reduced corporate tax, import duty relief, R&D allowances) and non-fiscal support (e.g. one-stop investor facilitation, utility access, visa streamlining) to attract sustainable investment and promote structural transformation (Republic of Namibia, 2022). As of 2025, the policy was in early implementation, with several incentives already introduced, marking a shift ahead of the EPZs' scheduled phase-out by December 2025. Unlike the EPZ regime (which lacked a guiding policy and suffered from coordination failures and misalignment with national goals) the SSEZ framework is built on a clear policy foundation. However, while operational, its enabling legislation (the SSEZs Bill) is still being finalised. The SSEZs Bill constitutes the proposed primary legislation intended to operationalise the National Policy on SSEZs by providing a binding legal framework for the establishment, regulation, governance and administration of SSEZs in Namibia. While the policy articulates strategic objectives, guiding principles and incentive structures, the Bill is designed to translate these policy intentions into enforceable legal provisions governing land designation, investor obligations, institutional mandates, incentive administration and compliance mechanisms. In this respect, the policy serves as the normative and strategic foundation, whereas the Bill functions as its legal instrument of implementation.

The protracted process surrounding the finalisation of the SSEZs Bill can be attributed to several interrelated factors common to major economic legislation in developing contexts. These include the need to harmonise the proposed legal framework with existing legislation on investment, taxation, land use, labour and environmental management; extensive interministerial coordination; stakeholder consultations with the private sector and local authorities; and parliamentary scrutiny to ensure alignment with national development priorities and constitutional principles. While such delays may constrain policy certainty in the short term, they also reflect efforts to create a coherent and legally robust framework capable of supporting sustainable and socially responsible zone development over the long term. This legal framework is crucial to fully realising the policy's aims, especially in terms of land use, governance, incentives and investor protection. Given its early stage, this transitional period presents a strategic opportunity to assess the policy's theoretical assumptions, institutional design and incentive structures. Early evaluation allows for timely adjustments to enhance the SSEZs policy's long-term viability, coherence and impact ahead of the SSEZs Act's enactment.

Although EPZs were established in Namibia as a strategic policy to encourage industrialisation, job creation and export-driven growth, their overall performance has largely been considered subpar (Shikongo, 2016; Marenga, 2017; Elishi, 2019). Multiple evaluations (e.g. Shikongo, 2016; Marenga, 2017; Elishi, 2019) have indicated sustainability-related challenges of the EPZs in Namibia, particularly in the domains of environmental, social and economic CSR. These shortcomings not only compromised the long-term viability of the EPZs but also raised concerns regarding their alignment with national development goals and international sustainability standards. In light of these challenges, the Namibian government is in the process of transitioning from EPZs to SSEZs. The framework of SSEZs aims to rectify the deficiencies of Namibia's previous

EPZs by fostering a more inclusive, sustainable and socially responsible economic paradigm (Republic of Namibia, 2022). Nevertheless, the policy exhibits significant limitations. Supporting this assertion, Nangula Uaandja, the Chief Executive Officer of the Namibia Investment Promotion and Development Board, acknowledged that existing policy deficiencies are obstructing the SSEZs from realising their full potential (Ndhikwa, 2025). A crucial gap (central to this paper) pertains to the inadequate incorporation of CSR within the National Policy on SSEZs (2022–2027). Furthermore, there is a dearth of research critically assessing whether, and in what manner, the SSEZ model can surmount the CSR issues that afflicted the EPZs, particularly from a policy perspective. In the absence of such an assessment, there exists a danger that SSEZs may replicate the same errors as the EPZs, ultimately failing to achieve the transformative impact they aspire to deliver.

There is a good deal of literature (e.g. Shikongo, 2016; Marenga, 2017; Elishi, 2019; Khan et al., 2024) critiquing the efficacy of EPZs both in Namibia and on a global scale (particularly in relation to their sustainability failures and poor CSR practices). However, there is a conspicuous lack of research that would address the CSR sustainability stance, limitations and reform opportunities of the forthcoming SSEZs in the Namibian setting. Specifically, there is a dearth of scholarly or policy-driven analysis regarding how the current National Policy on the SSEZs incorporates and enforces CSR principles to ensure long-term sustainability. At present, no comprehensive assessment exists that measures the readiness of the SSEZ policy framework to facilitate responsible business conduct, environmental stewardship and community engagement. The transition from EPZs to SSEZs has not been critically assessed through a CSR sustainability perspective, despite this being a crucial area where EPZs have underperformed. Thus, there is a clear imperative to assess whether the SSEZs are structurally and policy-wise better positioned to achieve sustainable, socially responsible development outcomes. This paper presents the first thorough assessment of CSRs in Namibia's SSEZs framework, establishing a basis for future theoretical and empirical inquiries as well as policy enhancements aimed at improving CSR sustainability in industrial enclaves. While CSR priorities can be distinguished between the Global South and developed economies (often emphasising short-term social compensation over long-term sustainability in developing contexts), this paper adopts the position that such a distinction should not justify lower CSR expectations for SSEZs, particularly where zones are explicitly designed as sustainable development instruments. The research problem and gap outlined above will be addressed in the current paper through the following research questions:

RQ1: What are the key policy and institutional limitations that hinder the effective integration of CSR into the National Policy on SSEZs (2022–2027) in Namibia?

RQ2: What policy, regulatory and strategic interventions are necessary to embed CSR more effectively into the design, implementation and governance of Namibia's SSEZs?

The aim of this investigation is to foster a more integrated understanding of sustainability in the SSEZs by bringing attention to the often-ignored dimension of CSR and proposing viable methods to capitalise on its potential within Namibia's shifting economic landscape.

2. Literature review

2.1. Definitions and evolution of CSR

CSR refers to businesses' obligation to contribute positively to society while operating ethically and sustainably (Wirba, 2024). According to Kaittani (2023), CSR began as voluntary philanthropy or charity, shaped by business leaders' personal values in the 1950s and 1960s. In the U.S., figures like Carnegie and Rockefeller led such efforts. In developing regions, CSR reflected cultural values (such as 'dharma' in India and 'Ubuntu' in Africa) (Dartey-Baah & Amponsah-Taiwah, 2011; Bawa et al., 2025). By the 1970s–1980s, growing awareness of corporate impacts expanded CSR beyond philanthropy. In developed nations, Carroll's CSR Pyramid introduced economic, legal, ethical and philanthropic dimensions (Carroll, 1979; 1991). This period also saw the rise of stakeholder theory, emphasising accountability to broader groups beyond shareholders. Indeed, CSR gradually became integrated into corporate governance discussions as part of legitimising business in society (Lund-Thomsen et al., 2016). By the 1990s–2000s, Kaittani (2023) notes that CSR shifted toward strategic integration, aligning with business goals through sustainability reporting and ethical sourcing. Concepts as the 'Triple Bottom Line' and 'Creating Shared Value' highlighted CSR's competitive potential. In developing countries, CSR also became more strategic, driven by socio-economic needs, reputational concerns and gaps in public services (Wirba, 2024). Recent sustainability research highlights that CSR is increasingly framed as a core mechanism for advancing environmental sustainability objectives such as energy transition and resource preservation, beyond its earlier social philanthropic scope (Zhang & Hao, 2024). The last decade marked CSR's shift toward regulation. India's 2013 Companies Act mandated 2% profit allocation to CSR (Government of India, 2013), while countries like Mauritius, Indonesia and Nigeria adopted sector-specific laws. In contrast, Kelkar and Katole (2023) highlight that developed nations such as the United Kingdom and France have introduced legally binding requirements for non-financial corporate disclosures (covering environmental, social and governance [ESG] impacts) as well as human rights due-diligence obligations. These obligations require firms to identify, prevent and address human rights risks within their operations and supply chains, further reinforced by broader European Union corporate governance mandates. Moreover, scholars argue that while CSR's origins are philanthropic, the contemporary focus increasingly emphasises formal institutionalisation, including reporting systems and environmental performance metrics across firms (De Toni & Morello, 2025). CSR has thus evolved from voluntary goodwill to a structured, often legally binding, governance element. While developed countries increasingly combine legally mandated non-financial disclosure and due-diligence requirements with voluntary, market-driven CSR implementation mechanisms, many developing countries have adopted more explicit mandatory CSR obligations to address structural inequalities and development gaps. Despite varying paths, global ESG standards have made CSR central to responsible business. Various theories provide a useful framework for understanding the underpinnings of CSR. These theories are discussed below.

2.2. Theoretical framework

To critically analyse the integration of CSR within Namibia's SSEZs, this paper draws on three key theoretical lenses. These are Carroll's CSR Pyramid, Stakeholder Theory and Institutional Theory. These frameworks offer a multi-dimensional perspective for understanding the obligations of firms toward society, the importance of stakeholder engagement, and the influence of institutional environments on CSR practices. Each theory provides valuable insights into the normative, strategic and structural aspects of CSR in the context of Namibia's SSEZ governance.

Carroll's CSR Pyramid provides a foundational framework for conceptualising the layered responsibilities of firms, distinguishing between economic, legal, ethical and philanthropic dimensions of corporate conduct (Carroll, 1979; 1991). While economic responsibility traditionally prioritises profitability, employment creation and innovation, contemporary sustainability perspectives reinterpret this dimension as long-term value creation that respects ecological limits and fair labour practices. Legal responsibility extends beyond basic compliance with labour, environmental and consumer protection laws to encompass emerging global frameworks such as due diligence obligations and mandatory CSR requirements, positioning it as a core element of ESG governance. Ethical responsibility reflects societal expectations that transcend legal mandates, requiring firms to act fairly, avoid harm, and respect human and environmental rights. This is particularly salient in contexts where regulatory protections may be weak. Philanthropic responsibility, although voluntary, remains especially significant in developing economies, where corporate initiatives often complement limited public service provision in areas such as education, healthcare and environmental protection (Wirba, 2024). Taken together, these dimensions illustrate the evolution of CSR from discretionary charity to a comprehensive governance framework requiring alignment with sustainability objectives.

Stakeholder Theory complements Carroll's framework by broadening the scope of corporate accountability beyond shareholders to include employees, local communities, governments and environmental stakeholders affected by corporate activity (Mahajan et al., 2023). Within Namibia's SSEZs, this perspective underscores the importance of engaging host communities and other stakeholders to ensure that investment-driven development aligns with local socio-economic and environmental priorities. Integrating stakeholder perspectives into corporate decision-making enhances social legitimacy, mitigates operational risks and promotes inclusive development outcomes, particularly in zones intended to function as catalysts for structural transformation.

Institutional Theory further strengthens the analytical framework by explaining how organisational behaviour is shaped by formal rules, regulatory frameworks, norms and shared cultural expectations within a given institutional environment (North, 1990). Rather than viewing firms as purely profit-maximising actors, the institutional theory explains corporate behaviour as a response to institutional pressures that define what is considered legitimate, appropriate and acceptable within society (Silva et al., 2024). DiMaggio and Powell (1983) identify three key mechanisms through which institutions influence organisational conduct: coercive pressures (arising from laws, regulations and state authority), normative pressures (stemming from professional standards, ethical

norms and societal expectations), and mimetic pressures (where organisations imitate perceived best practices to gain legitimacy). In the context of CSR, institutional theory has been widely applied to explain why firms adopt socially responsible practices when they are embedded in strong regulatory and governance systems (Matten & Moon, 2008; Campbell, 2007). In developed economies, CSR is often institutionalised through formal legislation, disclosure requirements and market-based governance mechanisms. In contrast, in many developing countries, weak regulatory capacity, fragmented governance and limited enforcement reduce coercive institutional pressures, resulting in CSR remaining largely voluntary and philanthropic (Jamali & Karam, 2018). This institutional weakness explains why CSR in the Global South frequently lacks consistency, accountability and long-term impact.

As regards Namibia's SSEZs, institutional theory provides a critical lens for analysing how the absence of formal CSR mandates, weak enforcement mechanisms and fragmented governance structures undermine the integration of CSR into zone operations. This stands in contrast to Ostrom's (1990) proposition that clearly defined institutional arrangements and locally crafted rules can facilitate collective action and effective governance outcomes. The theory underscores the central argument of this paper: without clearly defined institutional rules, regulatory obligations and accountability mechanisms, CSR cannot be effectively mainstreamed into SSEZ governance. Strengthening formal institutions (through policy mandates, regulatory oversight and standardised reporting requirements) is therefore essential to embedding CSR as a structural component of sustainable industrial development in the Global South.

While the above serve as foundational frameworks for CSR, their relevance in developing economies exposes specific complexities that are shaped by local social, economic and political conditions. It is vital to understand how these theories engage with fragile institutions, informal economies and developmental challenges to fully appreciate the unique aspects of CSR practices in regions like Africa and the Global South.

2.3. CSR in developing economies

Building on the conceptual evolution of CSR outlined in Section 2.1 and the theoretical lenses discussed in Section 2.2, CSR in developing economies can be described as operating within complex socio-economic and political environments characterised by institutional fragility, informality and developmental pressures (Inekwe et al., 2021). Despite these challenges, CSR has evolved through context-sensitive approaches. Shayan et al. (2022) highlight that many companies align CSR with local needs, cultural values and development goals. In Africa, philosophies like Ubuntu frame CSR as communal duty. The philosophy of Ubuntu in African contexts (captured in the idea that "a person is a person through other people") has been discussed as a culturally grounded normative basis for CSR, emphasising communal welfare, shared obligations and social interconnectedness that extend corporate responsibilities to broader community well-being (Makwara et al., 2023). Ubuntu has been linked to ethical and stakeholder-oriented CSR practices in Africa, suggesting that firms influenced by

Ubuntu values may prioritise community solidarity and mutual benefit in their social responsibility activities. However, scholars also note an ongoing debate about the extent to which Ubuntu functions as an independent CSR theory or whether it primarily complements broader CSR frameworks (Makwara et al., 2023). Conversely, governments in India, Mauritius, Kenya and South Africa have institutionalised CSR through laws and national strategies, with India's 2013 CSR mandate as a key example (Government of India, 2013). CSR increasingly supports SDGs, focusing on climate resilience, gender equality, youth empowerment and inclusive employment. According to Osei-Kyei et al. (2019) and Quaye et al. (2024), emerging models (such as public-private partnerships, social enterprises and community-driven initiatives) integrate CSR into broader development agendas. While CSR in the Global South faces barriers as institutional weakness, informality and extractive reliance, these challenges have also fostered locally grounded innovations. For CSR to be effective, it must move beyond philanthropy and compliance, embedding itself in local contexts, participatory governance and sustainable development.

Indeed, CSR priorities differ fundamentally between the Global South and developed economies. CSR in developing countries is primarily expected to compensate for weak public infrastructure, inadequate labour regulation and limited social protection, whereas CSR in developed countries is oriented toward long-term sustainability, environmental stewardship and advanced ESG commitments. While this distinction reflects empirical realities in many contexts, this paper does not adopt the position that such differences warrant lower long-term CSR expectations in the Global South. Instead, it aligns with the view that sustainability, social equity and environmental responsibility are interdependent and equally essential across regions, particularly within policy-engineered spaces such as SSEZs. Given that SSEZs are deliberately framed as sustainable development instruments rather than emergency welfare mechanisms, limiting CSR to short-term compensatory functions risks reproducing structural inequalities and undermining their transformative potential. Consequently, this paper assumes that CSR in Namibia's SSEZs should simultaneously address immediate social needs and long-term sustainability objectives, rather than treating these goals as mutually exclusive or sequential. A further theoretical question concerns whether informal CSR mechanisms (particularly corporate philanthropy and voluntary social initiatives) can adequately compensate for the absence of formal institutions in developing contexts. Scholars such as Elinor Ostrom have persuasively demonstrated that informal institutions and community-based governance arrangements can, under certain conditions, outperform formal state-led institutions, especially where local knowledge, trust and collective action are strong (Ostrom, 1990). However, this paper argues that such insights are not directly transferable to the context of CSR in SEZs. Unlike community-managed commons, SSEZs are capital-intensive, investor-driven and policy-engineered spaces dominated by corporate actors whose primary accountability is to shareholders rather than local communities. In this setting, informal CSR practices (typically philanthropic, discretionary and reputational in nature) lack enforceability, standardisation, continuity and rights-based protection. They are therefore structurally incapable of guaranteeing labour rights, environmental safeguards, or equitable community benefits at scale.

Moreover, reliance on voluntary philanthropy does not crowd out effective informal institutions in the Ostromian sense; rather, it often substitutes for absent formal regulation without empowering communities or creating durable governance arrangements. In contexts characterised by power asymmetries between multinational firms and host communities, informal CSR tends to reinforce corporate discretion rather than collective self-governance. Consequently, this paper posits that while informal social initiatives may complement CSR frameworks, they cannot substitute for formal institutional mechanisms (such as mandatory standards, reporting requirements and enforcement structures) required to embed CSR as a stable and accountable component of SSEZ governance in the Global South. In addressing development challenges, many countries are also adopting strategies like SEZs to promote inclusive growth.

2.4. Theoretical rationale for SEZs

SEZs are designated areas within a country that operate under different business and trade regulations, offering incentives like tax breaks and simplified customs procedures to attract investment (Jawad, 2021; Zeng, 2021). Rooted in development economics and industrial policy, SEZs aim to attract foreign and domestic investment, create jobs and boost exports (Jawad, 2021; Zeng, 2021). Firstly, SEZs help attract FDI by mitigating broader investment risks (e.g. such as poor infrastructure and bureaucratic hurdles) through favourable regulatory and fiscal environments. The foundational studies of Jawad (2021), Zeng (2021) and Ncube (2023) collectively establish the economic rationale for SEZs and provide the analytical basis for later discussions on sustainability and CSR integration. Subsequent sections therefore build on, rather than restate, these insights. Jawad (2021) states that SEZs are especially effective in developing economies, where they act as competitive micro-enclaves for industrial growth. Secondly, Ncube (2023) states that SEZs generate employment, particularly in labour-intensive sectors like textiles and agro-processing. They provide jobs for both skilled and unskilled workers and facilitate skill transfer and human capital development. Clustering firms within SEZs also fosters supporting industries and broader job creation. Thirdly, SEZs enhance export performance by encouraging export-oriented industrialisation (Ncube, 2023). Inspired by successful models in East Asia, SEZs help diversify economies, earn foreign exchange and promote global competitiveness (Danja & Wang, 2024). They also expose local firms to international standards, boosting productivity and technological progress. In summary, SEZs serve as strategic tools for economic development by attracting investment, generating employment and expanding exports. Their success, however, depends on factors such as infrastructure, governance and integration with the broader economy. When well-designed and contextually adapted, SEZs can be powerful drivers of industrialisation and inclusive growth. While SEZs have proven effective in driving investment, employment and export growth, their rapid development often brings unintended social and environmental consequences. These sustainability challenges (discussed in the next section) highlight the critical need to integrate strong CSR practices into SEZ planning and operations.

2.5. Sustainability challenges in SEZs globally

SEZs have driven economic growth in developing countries, but often at the cost of environmental harm, labour rights violations and social exclusion, highlighting the need for strong regulation and enforcement. Empirical evidence from Southeast Asia illustrates how weak environmental oversight has resulted in deforestation, pollution and ecosystem loss, particularly in coastal and industrial zones (Cahyaningsih et al., 2022; OECD, 2023). Labour-related challenges are equally prominent, with cases of unfair wages, unsafe working conditions and limited legal protections, as observed among migrant workers in Thailand (Myanmar Times, 2018; OECD, 2023). These dynamics often exacerbate social inequalities (including land seizures and forced evictions), marginalising host communities while prioritising investment efficiency. Collectively, these challenges underscore the inadequacy of growth-centric SEZ models and highlight the necessity of embedding robust CSR frameworks that integrate environmental stewardship, labour protections and inclusive community development.

CSR offers a pathway to address these issues. In Southeast Sulawesi, Indonesia, CSR programmes by a nickel mining firm were found to have a positive effect on local community resilience and adaptive capacity, enhancing collective efficacy, community action, and adaptation outcomes (Rela et al., 2020). However, in many African regions, CSR often overlooks environmental concerns in favour of immediate social needs, revealing a need for more balanced, holistic CSR strategies that equally prioritise environmental stewardship. Addressing the environmental, social and labour challenges in SEZs requires more than regulatory measures. It calls for robust CSR frameworks that promote responsible business practices. By embedding CSR as a core element in SEZ frameworks, these zones can balance economic growth with social equity and environmental stewardship, transforming these zones into models of sustainable development.

2.6. CSR as a pillar of sustainability in SSEZs

In SSEZs, CSR encourages firms to move beyond profit maximisation by internalising social and environmental impacts and aligning operations with equity and stewardship. CSR initiatives in labour rights, community development and environmental management reduce conflict, enhance productivity and improve ecological outcomes while creating shared value for businesses and communities (Bedoya et al., 2025). Economically, Porter and Kramer's (2011) CSV framework highlights CSR-driven innovation as central to SSEZ performance, strengthening efficiency, market access and reputation. Socially, CSR fosters inclusive growth through fair labour practices, skills development, health and community engagement, as evidenced in India's SEZ investments (Niruban Projoth & Jeyapaul, 2024). Environmentally, CSR advances green technologies and resource sustainability, often offsetting weak regulatory frameworks in developing contexts (Wei et al., 2024). However, without strong governance, transparency and stakeholder participation, CSR risks becoming symbolic rather than transformative (Reid et al., 2024). Embedding CSR within SSEZ policy and

governance frameworks is therefore essential. Overall, CSR is a core pillar of SSEZ sustainability and, when effectively governed, can transform SEZs into engines of sustainable development aligned with national and global goals. The next section highlights best practices from China, India, Mauritius and Kenya, demonstrating how embedded CSR drives inclusive, sustainable growth.

2.7. Best practices: CSR integration in SEZs

The integration of CSR into SEZs has proven effective in promoting sustainable development globally. Case studies from China, India, Kenya and Mauritius highlight how CSR, when embedded in SEZ governance, delivers tangible social, environmental and economic benefits. In China, Shenzhen's evolution from a growth-driven SEZ into a model of socially and environmentally responsible industrialisation illustrates how sustained regulatory oversight and strategic investment in social welfare can balance rapid economic expansion with improved living standards (UN Habitat, 2019). India's approach reflects a more formalised regulatory model, where mandatory CSR provisions under the Companies Act and the National Voluntary Guidelines have compelled firms operating within SEZs to systematically invest in community development, education and environmental sustainability (Government of India, 2011; Acharya, 2025). Mauritius offers an incentive-based model, where fiscal benefits encouraged firms to integrate CSR into export-led growth strategies, resulting in significant employment creation and inclusive economic outcomes (Arise Integrated Industrial Platforms, 2022). Similarly, Kenya's EPZ framework demonstrates how policy encouragement of community-oriented CSR initiatives and environmental responsibility can enhance social welfare while strengthening a country's reputation as a responsible investment destination (Mutunga & Namusonge, 2024). Collectively, these cases underscore that CSR is most effective in SEZs when it is embedded through a combination of regulatory mandates, fiscal incentives, and governance oversight rather than left to voluntary corporate discretion.

While the institutional contexts of China, India, Mauritius and Kenya differ, these cases converge on three critical lessons: the importance of legally anchored CSR obligations, institutional oversight mechanisms and structured stakeholder engagement. Rather than treating CSR as discretionary, these SEZ models embed social responsibility within governance frameworks, licensing conditions and performance evaluation systems. These cross-cutting insights are particularly relevant for Namibia's SSEZs, which are currently in a formative policy stage and thus well positioned to institutionalise CSR from inception rather than retrofitting it post-implementation. Building on global examples of successful CSR integration in SEZs, Namibia's evolving SEZ landscape reflects a commitment to not only economic diversification and export growth but also sustainability, social inclusion and corporate responsibility through its recent SSEZ policy framework.

2.8. Namibia's SEZ/SSEZ situational and policy landscape

2.8.1. Historical evolution of SEZs in Namibia

Namibia's development of economic zones reflects its broader strategy to diversify the economy, attract investment and boost exports since independence in 1990. Initially, Namibia established Free Trade Zones (FTZs) in the early 1990s to promote export-oriented manufacturing by offering customs duty exemptions and fiscal incentives, leveraging its strategic port access at Walvis Bay. However, infrastructural and institutional constraints limited their overall impact (Shikongo, 2016). To deepen industrialisation, Namibia introduced EPZs in the 1990s.

2.8.2. Overview of Namibia's former Export Processing Zones (EPZs)

Namibia's Export Processing Zones (EPZs), operational from the 1990s until their replacement by Sustainable Special Economic Zones (SSEZs), were primarily established to attract foreign investment, stimulate industrial growth and promote export-oriented economic development. The EPZ framework provided a range of incentives, including corporate tax and customs exemptions, simplified administrative procedures and reduced regulatory obligations, aimed at making the zones attractive for international investors (Republic of Namibia, 2022). Despite achieving some success in generating employment and facilitating FDI, the EPZs exhibited notable limitations in terms of social and environmental responsibility. Firms operating within these zones generally adhered to minimal CSR practices, which were mostly philanthropic or ad hoc in nature. Community development initiatives, labour rights protections and local skills development were often neglected. Institutional oversight was fragmented, with regulatory agencies lacking the coordination, technical capacity, or enforcement mechanisms to ensure socially responsible business practices (Marenga, 2017). Environmental management, though partially addressed through the Environmental Management Act 7 of 2007, often overlooked social impacts such as local employment conditions or long-term community benefits (Republic of Namibia, 2007).

The historical experience of EPZs provides a critical reference point for the design of Namibia's SSEZs. The shortcomings observed under the EPZ system (i.e. limited CSR, weak accountability and fragmented institutional oversight) highlight the necessity for SSEZ governance frameworks to embed CSR as a core principle. Understanding EPZ functioning allows for a more informed assessment of the SSEZs' policy and institutional innovations, particularly in evaluating whether CSR integration is adequately addressed in the current economic zone model. Beyond the design of policies and incentives, the limited performance of Namibia's EPZs was also influenced by enforcement and institutional capacity constraints. Although the EPZ legislation established certain regulatory expectations, enforcement was inconsistent due to fragmented governance, limited staffing and inadequate monitoring mechanisms. For instance, labour standards, environmental compliance and investor reporting obligations were often loosely

supervised, allowing firms to operate with minimal accountability (Campbell, 2007). These enforcement gaps illustrate that even well-designed policies may fail to achieve intended outcomes if institutional capacities are weak, highlighting the importance of both robust policy design and effective implementation in the context of SSEZs. Responding to these issues and global sustainability trends, Namibia adopted the SSEZ Policy in 2022. Building on past EPZ experiences, Namibia's 2022 SSEZ Policy modernises incentives while emphasising sustainability, social equity and economic diversification, though CSR remains voluntary.

2.8.3. National Policy on SSEZs (2022–2027)

Namibia's National Policy on SSEZs (2022–2027) marks a shift from the outdated EPZ regime to a sustainability-oriented, policy-driven model aimed at attracting investment, advancing industrialisation and promoting inclusive regional growth (Republic of Namibia, 2022). Adopted in August 2022, the policy offers competitive incentives, including a reduced 20% corporate tax rate, VAT exemptions, capital allowances and streamlined services through a One-Stop Shop. A grandfathering clause allows existing EPZ firms to retain 0% tax and VAT exemptions until 31 December 2025, after which they must transition to SSEZs (Republic of Namibia, 2022).

The SSEZ framework complements broader manufacturing and export incentives, such as an 18% tax rate for new manufacturers and allowances for exports, transport, marketing and training, while consolidating legacy subsidies during the transition. By 2025, implementation was at an early stage, with some incentives introduced ahead of the EPZ phase-out. Unlike EPZs, which suffered from weak coordination and regulatory gaps, SSEZs are underpinned by a comprehensive policy framework, though the enabling SSEZ Bill remains under parliamentary finalisation. This transitional phase provides an opportunity to refine policy design and incentives before enactment. The policy seeks to lower business costs while promoting sustainable industrial development grounded in environmental sustainability, social equity and economic diversification. It supports diverse zone types, encourages public–private partnerships, and emphasises green industrialisation, innovation and inclusive growth to address the social and environmental shortcomings of earlier FTZ and EPZ models (Republic of Namibia, 2022). While the policy aligns SSEZs with national development goals, the SDGs, and climate resilience, its approach to CSR remains implicit and voluntary, potentially limiting consistent and accountable implementation across zones.

3. Research methodology

Following Creswell and Poth (2018), this paper used a qualitative research design based on an interpretivist paradigm to explore the meanings and social constructs of CSR within Namibia's SSEZs. This approach allowed an assessment of interpretations of policy documents, institutional frameworks and scholarly discourse to reveal CSR

integration challenges and reform opportunities in the context of Namibia's SSEZs. Given the exploratory aims to identify policy and institutional gaps and suggest interventions, qualitative methods provide the necessary depth and contextual sensitivity (Denzin & Lincoln, 2018). The paper relies solely on secondary data for a comprehensive review of existing knowledge, including Namibia's National Policy on SSEZs (2022–2027), relevant legislation, regulatory guidelines, government reports and academic literature on CSR and SSEZs. As guided by Saunders et al. (2019), data were collected systematically through academic databases and government websites, ensuring diversity and thoroughness. The analysis is guided by thematic analysis aligned with the research questions. Key themes derived from these questions include: 1. Policy and Institutional Barriers to CSR Integration in Namibia's SSEZs; and 2. Embedding CSR in SSEZs in Namibia: Policy, Regulatory and Strategic Interventions. These themes were used for the interpretive content analysis of selected documents and literature.

In further analysing data, the methodology combines theory deduction with interpretive content analysis, using relevant CSR theories (such as Carroll's Pyramid, stakeholder and institutional theories to frame the analysis). Thematic analysis was applied to organise and interpret recurring patterns across the data, guided by the two research questions. The paper codes policy texts and literature to identify CSR presence or gaps, institutional enablers or barriers, stakeholder engagement, social sustainability issues and recommended interventions. Coding was conducted manually, with themes informed by the research questions of the paper. The interpretive lens contextualises findings within Namibia's socio-economic and political realities, recognising CSR as socially constructed. To ensure rigor, triangulation cross-checks across multiple data sources and reflexivity addressed potential biases. Transparency was maintained through detailed documentation and direct quotations. Ethical concerns were minimal due to use of public secondary data, with full citation to uphold academic integrity. This methodological framework rigorously addresses research questions through qualitative, interpretive analysis grounded in secondary data and theory, providing nuanced insights into CSR integration in Namibia's SSEZ policy and institutions.

To address the comparative dimension of the analysis, this paper adopts a theory-informed and benchmark-based evaluative framework (Yin, 2018). The comparison is not intended as a direct empirical comparison between countries, but rather as an analytical assessment of Namibia's SSEZ policy against established CSR norms and internationally recognised good practices. The three CSR theories (Carroll's CSR Pyramid, Stakeholder Theory and Institutional Theory) are used as normative and analytical benchmarks to identify expected CSR dimensions, including legal responsibility, ethical conduct, stakeholder engagement, institutional accountability and social value creation. In parallel, selected international SEZ experiences (from countries such as India, Kenya, Mauritius and China) serve as practical reference points illustrating how these CSR principles have been operationalised within SEZ governance frameworks. The basis of comparison therefore rests on a set of recurring analytical criteria derived from both theory and practice, namely: 1. the presence of explicit CSR mandates in SEZ policy and legislation; 2. institutional mechanisms for enforcement, monitoring and reporting; 3. requirements for stakeholder and community engagement; and 4. accountability and transparency

structures. Namibia's National Policy on SSEZs is systematically assessed against these criteria to identify policy and institutional gaps, as well as to inform context-specific recommendations for strengthening CSR integration.

4. Discussion of findings

This section articulates and interprets the essential findings resulting from the assessment of the integration of CSR within Namibia's SSEZs. The conclusions presented here do not rely solely on the government's stated reform rationale but emerge from a systematic examination of both the presence and absence of CSR-related provisions across the reviewed texts. The discussion of findings is structured around a theory-informed comparison between Namibia's SSEZ policy framework and established CSR benchmarks derived from both CSR theory and international SEZ best practices. Guided by the research questions, the discussion begins by scrutinising the limitations found within the existing policy and institutional frameworks that obstruct the mainstreaming of CSR. It then proceeds to discuss proposed interventions (policy, regulatory and strategic) that could facilitate the incorporation of CSR principles in the design, execution and governance of SSEZs. The findings are contextualised against the backdrop of existing literature and the overarching development context in Namibia. To enhance analytical transparency, the discussion begins with a concise summary of the document analysis, outlining the key CSR-related patterns and gaps identified in the reviewed policy and institutional texts, before proceeding to interpret these findings and propose policy interventions.

4.1. Summary of document analysis

The analysis of key policy and institutional documents reveals a consistent pattern of limited and implicit engagement with Corporate Social Responsibility within Namibia's SSEZ framework. Core documents examined include the National Policy on SSEZs (2022–2027), relevant investment and industrial policy instruments, environmental legislation and supporting regulatory guidelines. Across these documents, CSR is not explicitly defined, operationalised, or mandated as a governance requirement for zone developers or tenant firms. The analysis shows that while the SSEZ policy places strong emphasis on economic competitiveness, investment attraction and environmental sustainability, social responsibility dimensions (such as labour standards, community engagement, social impact mitigation and local development contributions) are addressed only indirectly or remain absent. References to sustainability largely focus on environmental compliance rather than integrated social and economic responsibilities. No explicit provisions were identified requiring CSR plans, social impact assessments, stakeholder consultation mechanisms, or CSR reporting as conditions for SSEZ participation.

Furthermore, the document analysis indicates weak institutional alignment between SSEZ governance structures and existing social and labour regulatory frameworks. While

environmental impact assessments are legally required under Namibia's Environmental Management Act, equivalent social responsibility instruments are not systematically integrated into SSEZ approval, monitoring, or evaluation processes. Institutional responsibilities for overseeing social outcomes are fragmented across multiple agencies, with no single authority mandated to coordinate or enforce CSR-related obligations within SSEZs. Overall, the document analysis reveals a policy architecture in which CSR remains voluntary, fragmented and largely peripheral to SSEZ governance. These findings provide the empirical basis for the discussion of policy and institutional barriers to CSR integration, as well as for the proposed policy, regulatory and strategic interventions outlined in the sections that follow.

4.2. Policy and institutional barriers to CSR integration in Namibia's sustainable SEZs

The results of this paper highlight numerous significant shortcomings in Namibia's existing policy and institutional structures, which will considerably obstruct the successful incorporation of CSR within its SSEZs at full implementation. In spite of the nation's dedication to sustainable development, particularly as outlined in the 2022 SSEZ Policy, CSR continues to be largely marginal in terms of both policy expression and institutional execution. This situation is particularly concerning given that SSEZs are explicitly designed as long-term catalysts for inclusive and sustainable industrial growth, rather than as short-term compensatory mechanisms for regulatory or infrastructural deficits. A key limitation of Namibia's SSEZ policy is the absence of clear CSR mandates. Analysis of the 2022 SSEZ policy shows that CSR is neither explicitly defined nor required of investors or zone operators; instead, the policy prioritises structural transformation, inclusive growth and job creation without specifying CSR obligations (Republic of Namibia, 2022). Consequently, it lacks mechanisms to ensure meaningful contributions to social welfare, labour rights, or community development. This omission contradicts Carroll's CSR Pyramid by neglecting ethical and philanthropic responsibilities, marginalises community interests under Stakeholder Theory, and fails to institutionalise CSR through formal rules and norms as emphasised by Institutional Theory. Unlike India, where CSR is embedded in the Companies Act and SEZ guidelines (Government of India, 2011; Acharya, 2025), Namibia treats CSR as voluntary and supplementary rather than integral to governance.

This policy gap is reinforced by a broader voluntarist CSR culture in Namibia. Evidence points to a systemic reluctance to move from discretionary philanthropy to enforceable social accountability. CSR initiatives remain largely unregulated and inconsistent, with some large firms (particularly in extractive industries) supporting community, education, or health projects primarily for reputational reasons rather than policy compliance (Shilongo, 2023). In SEZ-related sectors such as logistics, energy and light manufacturing, CSR engagement is uneven, ad hoc and reactive, lacking alignment with the SDGs or SEZ objectives. Overall, CSR practice remains largely confined to philanthropy, reflecting persistent gaps relative to Carroll's CSR Pyramid. It similarly falls

short of the standards of Stakeholder Theory, which emphasises institutionalised stakeholder engagement, and highlights weaknesses in terms of Institutional Theory, given the absence of formal norms or regulatory mechanisms to embed CSR within SEZ governance. Additionally, a critical institutional limitation is the absence of CSR integration into the investment screening and performance evaluation processes within SEZ governance structures. The analysis reveals that the Namibia Investment Promotion and Development Board, which is/will be responsible for evaluating investment proposals and fostering industrial growth in the SSEZs, does not currently require CSR impact assessments or community engagement plans as part of the project approval process. This situation starkly contrasts with best practices in other jurisdictions (such as Kenya's SEZ Authority) which mandate social impact assessments (Republic of Kenya, 2015). The lack of such mechanisms in Namibia allows companies to operate in zones with minimal obligations to consider the socio-economic impacts of their operations on surrounding communities.

Institutional fragmentation and limited capacity significantly hinder effective CSR governance within Namibia's SSEZs. Multiple agencies (regional and local governments, the Namibia Investment Promotion and Development Board, and the Ministry of Industrialisation and Trade) operate independently, resulting in poor coordination and weak enforcement of integrated CSR standards covering labour rights, environmental protection and community development. A notable example is the EPZ firm Ramatex Textiles, which violated laws and failed to contribute CSR benefits to local communities (Marenga, 2017). Although the Environmental Management Act mandates Environmental Impact Assessments, these often omit social responsibility metrics as local employment or long-term socio-economic sustainability (Republic of Namibia, 2007). Public institutions also frequently lack the technical expertise, resources and enforcement authority to uphold sustainability regulations, let alone broader CSR requirements. This fragmentation highlights a gap relative to the expectations of Institutional Theory, which emphasises that formal norms and regulatory as well as cultural pressures should guide organisational behaviour. It also reflects a gap relative to Carroll's CSR Pyramid, as CSR is largely limited to philanthropy, and similarly diverges from the principles of Stakeholder Theory, which emphasises systematic engagement and protection of community interests. CSR in Namibia remains largely philanthropic, focused on charitable donations rather than rights-based development or social justice (Shilongo, 2023). Common activities include event sponsorships, educational or healthcare donations and sports support, which do not concern corporate practices or foster inclusive economic participation. The lack of deeper CSR commitments is striking, such as local skills development, SME inclusion in supply chains, or fair labour practices, key elements for genuine social sustainability. This reveals gaps in policy understanding and institutional vision regarding CSR's true role within SSEZs intended to drive Namibia's national development goals.

Overall, the accountability and transparency mechanisms are either weak or entirely lacking, which further compromises CSR governance. The majority of companies operating within SSEZs are not required to publish CSR reports, conduct third-party audits, or engage in ongoing stakeholder consultations. When reports are generated, they are often self-promotional and lack independent verification or metrics to assess impact. The absence of formal CSR disclosure requirements within SSEZ policy (such as

mandatory social audits, grievance redress mechanisms, or stakeholder advisory committees) results in communities and civil society having limited tools to hold investors accountable for their social and environmental performance. In summary, the above findings illustrate that Namibia's current SSEZ policy and institutional frameworks are insufficient in facilitating or enforcing CSR. The limitations identified (ranging from policy silence, voluntarism, and institutional fragmentation to superficial CSR practices and weak accountability) collectively hinder the integration of CSR as a significant contributor to sustainable industrial development under Namibia's SSEZs. Without intentional reforms to address these gaps, Namibia risks perpetuating a model of economic zoning that prioritises investment returns over social equity and long-term developmental impact as seen under the EPZs regime. Addressing these multifaceted policy gaps and institutional weaknesses is essential for advancing the integration of CSR within Namibia's SSEZs. This necessitates a comprehensive framework that transforms CSR from a peripheral voluntary activity into a core element of SSEZs governance and development. The section below responds to this need by discussing the findings related to the second research question on the policy, regulatory and strategic interventions for embedding CSR in Namibia's SSEZs.

4.3. Embedding CSR in SSEZs in Namibia: Policy, regulatory and strategic interventions

To effectively integrate CSR into the design, implementation and governance of Namibia's SSEZs, this paper finds that a coherent mix of policy, regulatory and strategic measures is required. The preceding analysis shows that the current policy and institutional framework accords CSR a marginal and largely voluntary role. To address this gap, the Government of Namibia, in collaboration with key stakeholders, should adopt a multi-tiered approach that positions CSR as a core pillar of sustainable industrial development within SSEZs. At the policy level, the most urgent step is to revise the National Policy on SSEZs (2022–2027) to explicitly define and institutionalise CSR as a foundational principle of zone development. While the policy emphasises economic and environmental sustainability, it remains largely silent on social dimensions such as labour rights, community engagement and equitable development. Embedding CSR would align the policy with Carroll's CSR Pyramid by extending responsibilities beyond economic and legal compliance to ethical and philanthropic dimensions, while also reflecting Stakeholder and Institutional theories by formalising CSR norms within governance structures. Incorporating CSR into policy objectives, operational guidelines and performance indicators would provide clarity and accountability for both public and private actors, helping to avoid the social and sustainability failures that characterised Namibia's EPZs. For instance, requiring zone developers and tenant firms to submit CSR plans aligned with national priorities (such as youth employment, skills development, or rural infrastructure) would make CSR a condition of SSEZ participation rather than an optional add-on, similar to practices in the Jin Fei SEZ of Mauritius.

From a regulatory perspective, findings indicate that CSR should be embedded in SSEZ licensing, monitoring and compliance mechanisms. This could include mandatory CSR clauses in investment and operator agreements, covering requirements such as minimum CSR expenditure (e.g. 1–2% of net profits), annual CSR impact reporting and local content obligations. Drawing on India's Companies Act (2013), Namibia could establish a legal framework that requires firms of a certain size or profitability (particularly within SSEZs) to undertake structured and reportable CSR activities. In addition, strengthening the Environmental Impact Assessment process by incorporating mandatory Social Impact Assessments would allow regulators to evaluate broader socio-economic impacts, including labour practices, displacement risks and community participation. Kenya's SEZ Act (2015), which links operational licensing to demonstrated environmental and social sustainability, provides a relevant comparative example (Republic of Kenya, 2015). Namibia could indeed benefit from a similar regulatory approach, particularly to avoid the regulatory failures and gaps of the EPZ model.

Equally important are strategic measures to strengthen institutional coordination, stakeholder participation and transparency in CSR governance. This paper finds that the Namibian Government should consider establishing a dedicated CSR Oversight Unit within the Namibia Investment Promotion and Development Board or the Ministry of Industrialisation and Trade to monitor CSR performance, ensure compliance and publish regular public reports. Such a unit could also develop standardised CSR indicators and implementation toolkits to guide businesses toward meaningful social impact. In addition, the introduction of Community Benefit Agreements (CBAs) between SSEZ investors and local communities, facilitated by government, would help ensure that host communities gain tangible benefits from zone development. These could include job training, education funding, health services and infrastructure provision, supported by legally binding and enforceable agreements with clear dispute-resolution mechanisms. Evidence from Canada shows that CBAs have been effective in resource-sector projects, particularly in Indigenous territories, in securing long-term community benefits from industrial investments (Hoekstra, 2023). These strategic proposals are consistent with Stakeholder Theory, as they prioritise the interests of affected communities in decision-making processes and outcomes. They also align with Carroll's CSR Pyramid and Institutional Theory by integrating ethical and philanthropic responsibilities into formal governance structures, thereby promoting socially accountable business practices. Indeed, this is essential for negating the absence of CSRs observed under Namibia's EPZ model.

To enhance accountability and responsiveness, this paper finds that the Namibian Government should institutionalise multi-stakeholder governance platforms in the SSEZs. These platforms would comprise representatives from local communities, civil society organisations, trade unions, municipal governments and private sector participants. Such platforms function to assess CSR plans, offer feedback, monitor project outcomes and voice concerns on behalf of affected groups. This approach aligns with global trends towards participatory governance in SEZs and ensures that CSR is not solely dictated by corporate interests but also mirrors the needs and aspirations of communities (Owuondo, 2024). Among the examples discussed above, China's Suzhou Industrial Park has established a stakeholder-inclusive CSR review committee that assesses corporate

social and environmental performance as part of zone governance. This positions the park as a model for green and socially responsible development.

Capacity building is another vital strategic aspect. Many firms in Namibia, especially small and medium-sized enterprises, may lack the necessary skills to effectively design or execute CSR initiatives. Therefore, findings show that it is essential for the government to collaborate with universities, development agencies, and industry associations to provide training programmes that focus on CSR strategy, reporting and stakeholder engagement. These initiatives would help instil a culture of social accountability across various sectors and create a foundation for effective CSR practices. In the Kigali SEZ in Rwanda, a partnership between the Rwanda Development Board and private consultancies has resulted in targeted training for local businesses on the integration of CSR and ESG standards, particularly in the manufacturing and agribusiness sectors (African Union, 2023). This is indeed possible for Namibia to emulate and safeguard against the negative effects observed under its EPZ model.

Finally, to promote positive behaviour, the Namibian Government could establish recognition and reward mechanisms for companies that exceed CSR benchmarks. This could involve expedited processing for expansion permits, public awards for CSR excellence, or preferential access to government contracts. At the same time, SSEZs firms that fail to meet their CSR obligations could face penalties, such as the loss of tax incentives or public blacklisting. In South Africa's Coega Industrial Development Zone, companies with strong CSR records receive public recognition and media visibility through the 'Investor of the Year' programme, which encourages healthy competition and improved social outcomes. Namibia could develop a similar approach that can further entice SSEZs firms to practice CSRs. In summary, the findings of this paper reveal that embedding CSR into the framework of Namibia's SSEZs requires a holistic reassessment of existing policies, legal frameworks and governance structures. Indeed, CSR must transition from a corporate philanthropic initiative to a strategic, regulated and participatory mechanism that promotes inclusive development. This shift will enhance the legitimacy and sustainability of SSEZs and ensure that industrial development serves as a platform for shared prosperity for the people of Namibia, particularly those in vulnerable and marginalised communities.

5. Conclusion

In light of the research questions formulated in the introduction section, this paper has arrived at the following conclusions. With reference to RQ1, the National Policy on SSEZs in Namibia is considerably lacking in its definition and implementation of CSR. Although the policy highlights environmental and economic dimensions of sustainability, it conspicuously fails to include explicit provisions regarding social responsibility, labour rights and community involvement. CSR continues to be predominantly voluntary and unregulated throughout Namibia's industrial and commercial sectors, resulting in inconsistent, philanthropy-driven approaches that do not significantly contribute to inclusive and sustainable development. Institutional

fragmentation limited regulatory capacity, and the lack of CSR performance benchmarks further intensify these deficiencies. In the absence of structured mechanisms (such as mandatory reporting, community benefit agreements, or social impact assessments) CSR remains marginal, and the potential of SSEZs to promote socially equitable industrial development is largely unrealised. These conclusions principally deviate from the stance of Carroll's CSR Pyramid, Stakeholder Theory and Institutional Theory.

With reference to RQ2, the paper proposes a range of policy, regulatory and strategic interventions to fill identified gaps in the SSEZs. These interventions include the formal integration of CSR mandates into SSEZs licensing frameworks, the development of mandatory CSR reporting systems, and the establishment of dedicated CSR oversight bodies within Namibia's SSEZs governance institutions. International best practices, such as India's legal CSR framework, Kenya's SEZ Act, China's participatory zone governance and Mauritius's integrated CSR commitments offer important lessons that can guide Namibia's context-specific reforms. In addition, multi-stakeholder governance platforms, local content requirements, and community benefit agreements are recommended as strategic mechanisms to ensure that SSEZ development is both inclusive and accountable to the communities it impacts.

The value and originality of this paper lie in its distinct focus on CSR within Namibia's SSEZs policy, a largely underexplored area. While existing studies (e.g. Endjala, 2024; Ndhikwa, 2025; Shipena, 2025) emphasise economic and environmental factors, this paper highlights the often-overlooked social dimension (CSR's role in promoting social equity, stakeholder engagement and community development in industrial zones). By addressing the gap between CSR theory and SEZ governance within Namibia's evolving SSEZ framework, it offers a fresh contribution to CSR and SEZ scholarship in Africa. Moreover, it proposes an evidence-based framework urging policymakers to view CSR not as discretionary but as a mandatory, strategic element of sustainable zone development. The paper's implications extend beyond Namibia to other developing countries, especially in the Global South, where SEZs drive industrialisation but often lack socially sustainable practices. It adds to previous literature advocating a rights-based, governance-focused CSR approach in SEZs, emphasising that sustainable economic zones should go beyond environmental compliance to actively create social value. Future research should empirically examine CSR practices and community outcomes within Namibia's SSEZ firms and conduct comparative studies across Southern African Development Community (SADC) countries to evaluate CSR governance models. Interdisciplinary work linking CSR with ESG frameworks could also deepen understanding of CSR's evolving role in industrial policy.

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Governing Global Public Goods: An Applied Research on Collaborative Malaria Prevention and Control in the Mekong Countries

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Abstract: In recent years, the world has been facing global issues such as the spread of pandemic and global warming. Countermeasures for these problems have been discussed using the concept of global public goods (GPGs). This article explores the necessity of establishing complex arrangements and governance structures for addressing global public goods, with an emphasis on the public health context, and combating infectious disease threats in particular. The article conceptualises malaria prevention and control as a global public good and suggests that its governance is likely to be more effective and sustainable if based on three multi-level settings: international rule-forming institutions; regionally embedded knowledge networks; and national cross-border infrastructures. Using the Mekong Countries as an empirical case, it evaluates the actor–recipient dynamics leveraging public health goods, and highlights the importance of adaptive, governance-rooted strategies for addressing epidemiological challenges. The article further argues that international norms must be activated and operationalised through both regional plurilateral and national bilateral pathways to build collaborative mechanisms and implement pragmatic health policies, thereby achieving effectiveness and sustainability. These findings contribute to cumulative theoretical insights into the transforming landscape of global health governance.

Keywords: global public goods, global health governance, malaria prevention and control, Mekong Countries, interregionalism

1. Introduction

Malaria is a parasitic infectious disease transmitted through the bite of infected Anopheles mosquitoes or via the transfusion of blood containing malaria parasites. It poses a grave threat to human health and represents a major barrier to social and economic development (Wang et al., 2021). The World Health Organization (WHO) identifies HIV/AIDS, tuberculosis (TB) and malaria as among the most critical public health challenges requiring urgent global action. Of these, malaria – predominantly found in tropical and subtropical regions – places considerable strain on healthcare systems in endemic countries. This pressure exacerbates shortages in human capital, increases fiscal burdens and depresses economic growth (Bärnighausen et al., 2013). Conversely, reducing and eliminating malaria would increase the efficiency of national healthcare systems, improving their capacity to address emerging health-security threats. Declines in malaria burden are also associated with decrease in neonatal and maternal mortality, improvement in labour productivity and broader economic advancement. As a result, combating malaria prevalence has been recognised as a core priority of the United Nations Millennium Development Goals (MDGs) (Owens, 2014).

Against this backdrop, *global health governance* has emerged as an essential approach to addressing public health challenges. This article adopts a perspective that designates public health interventions as global public goods – herein referred to as *global health goods*. To clarify the nature of health-oriented global public goods, the WHO categorised “global public goods for health” into three types (Ress, 2013): 1. physical healthcare resources and technologies aimed at controlling infectious diseases such as medical interventions for TB and HIV; 2. knowledge and information access, including treatment guidelines, surveillance datasets, and communicable disease information systems that support containment; and 3. international rules and institutions that establish governance frameworks and coordination mechanisms for global health. This macroscopic categorisation provides the scaffold for understanding how global health goods function and reciprocal dynamics arise in combating infectious diseases.

Building on the above foundation, this article reviews the existing scholarship and examines the research foci and approaches within global health governance. In particular, it investigates the interaction of actors–recipient feedback loops that shape the provision and distribution of global health goods. The research discussion is anchored in the concept of “governance”, which underscores the mechanisms through which global health goods are administered and coordinated. The concept of global health governance crystallised in the mid-1990s, stemming from the work of the Commission on Global Governance (Lee & Kamradt-Scott, 2014), as a response to contemporary health challenges. Within this domain, regional health governance offers an analytically appropriate geographical scale and constitutes a vital component for scrutinising governance commitments and performance. It entails cooperative and coordinated actions managing public health threats within specific regions – such as malaria prevention and control in the Mekong River Basin – through continuous endeavours among a range of geopolitical and geoeconomic stakeholders, including national governments, regional and international organisations and non-state actors.

Accordingly, this article designates the multi-level mechanisms for malaria prevention, detection and response in the Mekong Countries as the focal point of the case study. The region holds not only geo-strategical significance but also one of the world's most severely malaria-affected areas. Treating it as the core of the analysis here facilitates a nuanced exploration of the complex architecture of global health governance, yielding insights of both theoretical and practical relevance. The case embodies generalisable features as well as context-specific characteristics of collaborative governance in the provision of global health goods targeting infectious disease control. This article seeks to broaden understanding by offering perspectives on the design of governance frameworks and by informing policy formulation across wider spatial and institutional arenas. Through a problem-driven analytic pathway, it interrogates the core elements of global health governance – the object of governance (*what* is governed), the rationale of governance (*why* it is governed), and the institutional and operational modalities through which governance is enacted (*how* it is governed).

2. From global public goods to global health governance: An evolving conceptual framework

When discussing conventional public goods, analyses typically begin with the canonical rivalry–excludability matrix (Figure 1) in economics to classify a good's underlying properties. However, extending this framework straight to the global scale requires greater caution. Within the matrix, globally salient issues do not necessarily constitute pure public goods. Depending on institutional arrangements and the technologies of production and control, they may instead take the form of *public goods* (non-rival, non-excludable), *club goods* (non-rival but excludable), *common-pool resources* (rival yet difficult to exclude), or *private goods* (rival and excludable) (Adams & McCormick, 1987). What renders a good “global” firstly lies in the spatial reach and magnitude of its external effects, whereas its position in the matrix is contingent and can shift across geographic, social and temporal axes, reflecting the complexity of the real-world settings (Kaul et al., 1999). Against this backdrop, global public goods (GPGs) denote goods distinguished by a high degree of publicness, whose benefits or harms are transboundary and welfare-relevant at the global scale, rather than confined to discrete jurisdictions (Kejžar & Ponikvar, 2023). Moreover, GPGs vary in their properties of validity, such as climate-change mitigation produces cumulative benefits and typically requires sustained collective action; whereas vaccines and many pharmaceutical technologies are frequently “lumpy”, representing the discontinuity and is contingent upon substantial, time-sensitive provision to be effective (Mendoza et al., 2024).

Corresponding to the ideal economic notion, GPGs possess the intrinsic characteristics of publicness, *non-rivalry* and *non-excludability* alongside wide spillover range (Buchholz & Sandler, 2021). When an actor benefits from a GPG, it does not diminish the capacity of others to do likewise; once provision occurs, exclusion is difficult or infeasible. Conversely, viewed through the risk–cost lens, the deepening interconnectedness driven by trade and migration has amplified cross-border externalities,



Figure 1
The rivalry–excludability matrix for the classification of goods
 Source: Adams & McCormick, 1987.

increased the frequency and systemic spillover potential of transnational risks, heightening the burden-sharing challenges inherent in the provision of GPGs. Global phenomena such as epidemics, regulatory vacuums, armed conflicts and financial crises constitute escalating threats to global stability and living standards. Although these challenges affect the world as a whole, the most vulnerable are the least developed countries, owing to economic and political fragility, weak social safety networks and limited access to emergency assistance (Cornes & Sandler, 1996). These asymmetries shape prognoses regarding the supply of GPGs, as well as the urgency and design of provision-related interventions, prompting corresponding institutional reforms.

Traditionally, the intuitive understanding of GPGs has emphasised tangible embodiments as illustrated by infrastructure, information transmission and financial flows. Stiglitz (1995) categorises GPGs into a variety of domains: international economics, security, the international environment, humanitarian assistance and knowledge. Amidst these, knowledge encompasses universally applicable scientific truths that benefit humanity at large, as well as intellectual advancements with welfare gains, which initially accrue to specific countries or populations before being conditionally disseminated. Stiglitz (1999) mentions that a key factor to sustaining globalisation lies in the integration of global knowledge with local expertise, particularly in developing countries, where their capacity to leverage the benefits of global knowledge and the development of “knowledge infrastructure”, such as healthcare system, critically shapes development trajectories. In parallel, global institutions, born out in response to expanding governance demands, have a pivotal role in translating GPGs into policy interventions addressing global issues. Increasingly, scholars argue that the ontology of governance itself should be regarded as a form of GPG, especially when examining the transnational institutional arrangements to tackle concerns such as the prevention and control of pandemics. Birdsall and Diofasi (2015) emphasise that GPGs encompass the institutions and the outcomes that yield near-universal benefits across countries. This holistic conceptualisation of GPGs recognises the very act of governance mechanisms, governmental or non-governmental institutions, formal frameworks or collaborative networks that enable cross-border cooperation toward shared objectives (Rosenau, 1992), not merely as facilitators of public goods, but as a fundamental public good in their own right.

The viewpoint of Stiglitz represents a pioneering awareness of global health goods, as a distinct interpretation of GPGs within the realm of public health. A historical narrative can be traced back to the 4th-century CE guidebook by the Chinese physician Ge Hong (葛洪), which documented emergency prescriptions using the herb of Qinghao (青蒿; *Artemisia annua*) to treat intermittent fevers (Moon, 2008). Sixteen centuries later, this corpus of traditional knowledge contributed to Chinese researchers' identification of artemisinin as a potent anti-malaria compound during the Vietnam War (Gartner, 2012). In contemporary practice, artemisinin-based combination therapies remain the clinical mainstay for malaria, exemplifying how medical knowledge – when transferred, validated and refined – can evolve into a paradigmatic GPG. This knowledge lineage highlights the fundamental idea of global health goods in advancing public health. In current discourse, global health goods are commonly understood to encompass the following aspects: 1. health-focused research and development (R&D); 2. communicable disease control including epidemiological surveillance, immunisation and medicine; and 3. health-related information – largely non-excludable – exemplified by standardised data collection and dissemination systems (Smith et al., 2003). These components form the backbone of modern global health goods, highlighting the necessity of international collaboration and universal accessibility in addressing health challenges across borders.

The prevention and control of infectious diseases also reveal the dual nature of GPGs. Owing to the substantial spillovers, infectious-disease outbreaks are regarded as Global Public Bads (GPBs) – the analytical inverse of GPGs. While containment is universally desired, outbreaks themselves inflict widespread, non-excludable harms (Kaul & Faust, 2001), imposing costs on societies far beyond the locus of initial transmission. Conversely, effective disease control in one country can yield positive externalities for others, reinforcing the rationale for transnational collective action. Wealthier or medically advanced states therefore have strong realistic incentives (or face normative pressures) to invest in prevention and control efforts in developing countries, catalysing the proliferation of disease-targeted global health initiatives. This, in turn, provides an argument for the necessity of Global Health Governance (GHG). GHG refers to the foundational and transitional processes through which global governance regime for health is established, involving diverse stakeholders – states, intergovernmental organisations, non-state actors and private entities – in responding public health challenges characterised by “deterritorialisation”, requiring collective and cross-border actions for effective health solutions (Dodgson et al., 2002). The salience of public health within international relations (IR) discipline stems from its intrinsic interdependence among states, as reflected in international policy coordination. At the global level, institutions such as the WHO, UNAIDS and the World Bank function as key multilateral platforms for GHG. In addition, transregional state actors increasingly shape global health through transgovernmental engagement. In 2007, the foreign ministers of seven countries from different regions – including Brazil, France, and Norway – issued the Oslo Ministerial Declaration, launching the Foreign Policy and Global Health Initiative to promote GHG via diplomatic collaboration, and to embed health governance more deeply into the multilateral foreign-policy agenda (Sandberg et al., 2016).



Figure 2

Conceptual evolution from global public goods to global health governance

Source: Compiled by the authors.

Figure 2 illustrates a three-step logical deduction: beginning with the foundational concept of global public goods (GPGs); moving to their healthcare-oriented, real-world instantiation as global health goods; and culminating in the health-specific steering mechanisms of global health governance (GHG). This conceptual evolution from GPGs to GHG underscores the interconnected nature of medical needs and the imperative for sustained cooperation among state and institutional actors to fortify disease prevention and control. As global health threats continue to emerge, the adaptability and resilience of a complex, multi-level governance framework is indispensable for ensuring equitable and comprehensive responses.

3. Malaria in the Mekong Countries: Inequality and securitisation

Countries in the Mekong River Basin – Cambodia, Laos, Myanmar, Vietnam and Thailand – commonly referred to as the Mekong Countries,¹ have long faced persistent threats from infectious diseases, with malaria being one of the most severe and enduring challenges. Although concerted efforts between the 1950s and 1990s gradually eradicated malaria foci in lowland and urban areas of certain countries, the disease resurged due to multiple precipitating factors at the beginning of the 21st century. Since malaria disproportionately affects impoverished populations, its prevalence closely mirrors the intertwined socio-political surroundings and ongoing economic transformations. At present, Cambodia and Myanmar rank among the countries with the highest malaria burden worldwide (Cui et al., 2012a).

Geographically, the region is characterised by extensive forest landscapes serving as the epicentres of malaria outbreaks and epidemics. These areas are thus identified as “forest malaria” zones specific to the Mekong context (Prothero, 1999). In many Mekong Countries, underdeveloped infrastructure leaves rural villages without adequate access to

¹ The Mekong Countries refers to the five states located in the Mekong River Basin. This group is commonly represented by the acronym “CLMVT”. The Mekong Countries have also been known as “Indochina” culturally, or “Mainland Southeast Asia” geographically. This article conceptualises the Mekong Countries as a specific (sub) region-oriented cluster of international actors to more precisely define the participation and intervention of political entities in the Mekong River Basin affairs.

essential public health goods, heightening vulnerability to malaria transmission. Furthermore, border areas with high population mobility tend to record elevated infection rates compared to urban settings, the phenomenon termed “border malaria” (World Health Organization, 2010). The persistent transmission of malaria, compounded by scarcity of medical resources has positioned the Mekong Countries as the global hotspot for the emergence and spread of anti-malaria drug resistance. Epidemiologically, Myanmar has consistently reported the highest incidence and malaria-induced mortality rates in Southeast Asia over the past three decades – a governance failure pattern largely attributable to prolonged regime instability and the ensuing international sanctions. Since 2019, estimated malaria cases in the country have risen more than tenfold (World Health Organization, 2024), with a direct spillover effect on neighbouring Thailand, where reportedly imported cases have also markedly increased. These predicaments have imposed significant socio-economic burdens, especially on large rural communities in both countries (Cui et al., 2012b).

Historically, state actors in the river basin have concentrated primarily on domestic concerns despite facing similar public health threats, resulting in sluggish progress toward regional public health governance. Since the 1990s, the Mekong Countries have increasingly relied on the importation of GPGs – particularly medical assistance provided by intergovernmental organisations and NGOs as non-state actors – to improve regional healthcare quality and promote cooperation. Within the cooperative framework of the Greater Mekong Subregion (GMS), which includes China alongside the five Mekong Countries, malaria control was identified as a priority for subregional collaboration as early as 1994 (Asian Development Bank, 2005). The first subregional health forum convened in 2007 to facilitate knowledge sharing and exchange on epidemic-prevention practice. A further milestone was reached with the First Meeting of the GMS Working Group on Health Cooperation (WGHC-1) in 2017 (Greater Mekong Subregion Secretariat, 2017). Despite these efforts, health governance among the Mekong Countries remains predominantly reliant on fragmented, project-based assistance, and has yet to form a comprehensive and institutionalised structure.

Efforts toward interstate collaboration are constrained by divergent governance capacities, differing national interest perceptions and geopolitical considerations within the basin. Notable disparities persist in epidemic prevention and health system efficacy. Thailand possesses a comparatively advanced health sector and has assumed the frontrunner position in regional public health cooperation. Vietnam has experienced rapid progress, whereas Laos, Cambodia and Myanmar are lagging in socio-economic development and continue to face internal capacity restraints. With the growing frequency of transboundary material and personnel exchanges, the risk of infectious disease transmission is intensifying – unilateral or small-group responses are no longer sufficient. A shift toward pragmatic, collaborative action is an urgent necessity. However, cooperation among state actors is frequently undermined by fluctuating bilateral relations and changes in multilateral geopolitical climate. The Mekong Countries, in particular, carry a historical legacy of interstate tensions and security dilemmas, especially during the Cold War era of clashing ideological blocs, which have led to circumscribed armed confrontations and divergent pursuit of national security agendas. Thereby, the securitisation of health issues

adds a further layer of complexity to implementing cooperation and governance (Burci, 2014).

The concept of health securitisation entails framing health challenges as security threats and reallocating resources accordingly. It typically treats health issues as external crises requiring neutralisation, rather than as shared agendas necessitating pragmatic solutions (Holst & Pas, 2023). In parallel, health securitisation shapes stakeholders' perception of actors as well as issues, cultivating "securitised" mindsets. Novotny et al. (2013) argue that when health issues are perceived as public health crises directly tied to national interests, they are more likely to receive political prioritisation. This constructive dynamic is evident in the handling and sharing of infectious-disease samples: rather than being regarded as straightforward instruments for the circulation of public health goods, they frequently become sensitive and securitised matters – particularly during periods of heightened political conflicts – perceived as potential threats to national security.

4. Complex public health governance in the Mekong Countries

The severity and distinctiveness of malaria epidemic in the Mekong Countries make the region a critical case for GHG. Methodologically, existing gaps in institutional development and interstate cooperation do not encapsulate the whole picture of public health governance in the basin. In contrast with the limited progress of top-down governance architectures, localised cross-border joint prevention and control arrangements among the five countries have demonstrated considerable effectiveness in addressing infectious disease challenges, and have become an essential component of regional public health governance. To provide a comprehensive analysis, this article employs the *multi-level governance* approach to explore the full spectrum of governance dynamics in the region. Following Gary Marks's foundational formulation, multi-level governance system arises when the proliferation of institutions and the reallocation of decision-making authority disperse formerly concentrated governance functions within the state across territorial tiers – supranational, national and subnational – thereby institutionalising continuous intergovernmental consultation and dialogue (Marks, 1993).

Accordingly, the case study of the complex public health governance in the Mekong Countries examines: 1. the role of international regimes in epidemic prevention at the global level; 2. the macro functionality of health cooperation mechanisms among the Mekong Countries at the regional level; and 3. the micro-level implementation of local/cross-border infectious disease management by state and substate units. Prior research reveals that disease surveillance in many developing settings is hampered by structural weaknesses, including shortages of trained personnel and equipment, inadequate communication and transportation infrastructure and poor coordination among local authorities (United States General Accounting Office, 2001). Against such backdrop, this article adopts the conceptualised governance framework to address the fundamental question of how collaboration in the provision of public goods, especially in infectious disease control and resources management, has evolved and taken shape in the Mekong Countries?

4.1. The global level: International framework, implementation and goals of “Roll Back Malaria”

Institutions and rules are widely regarded as the cornerstone of sustained international cooperation and the implementation of global governance. Keohane (1984) argues that institutions enhance the predictability of actors' behaviour, reduce uncertainty in international interactions, lower transaction costs and diminish the likelihood of conflicts, thus fostering cooperation and stability. Since the 1990s, the paradigm of rule-based governance has gradually become a prevailing discourse in IR scholarship. Rosenau (1992) posits that governance fundamentally connotes a system of rule, while Keohane and Nye (2000) assert that governance encompasses both formal and informal institutions and processes that guide and constrain the collective actions of social groups.

Complementing this institutional focus, social constructivism emphasises the impact of soft-binding norms in sustaining peace and cooperation beyond formal arrangements, particularly through how norms shape the identities, preferences and interests of actors. Consequently, norm diffusion and actor socialisation become crucial pathways to global governance. From this perspective, the transmission of norms is often conceptualised as a process flowing from “West” to “non-West”, from “advanced” to “backward”, and from the international level to regional level. Finnemore (1996) characterised the dissemination of international norms as a “teaching” process undertaken by transnational actors and international organisations. Goldizen (2016) illustrates how the WHO socialises member states to internalise public health norms by adhering to its rules and procedures. Such compliance yields recognition and privileged access to information critical for disease prevention and control.

On the other hand, the notion of *Microbialpolitik* originated in the late 19th century, when European powers convened multilateral conferences and treaty regimes in response to infectious disease outbreaks emanating from the Americas, Africa, and Asia (Fidler, 1998). Early efforts aimed to mitigate the external threat by the establishment of quarantine zones at ports (Fidler, 2005). After World War II, advancements in environmental sanitation and medical technology diminished the infectious disease burdens in developed countries. Health governance subsequently shifted from border control to “source control”, while human rights, equity, development and diplomacy became prominent drivers of international health cooperation. Following the Cold War, trade expansion and economic liberalisation raised cross-border health risks, elevating public health on the global agenda (Kickbusch, 2016). As Keohane and Nye (2000) note, one of the most profound linkages of globalisation is the movement of biologically relevant substances. Emerging and re-emerging infectious diseases not only threaten human life but also pose unprecedented challenges to global political and economic order, bringing public health squarely into development debates and catalysing the rise of GHG.

GHG plays a critical role in addressing the complexity of disease prevention and control. Effective governance ensures the coordination of financial resources, political commitment and scientific expertise to mount responses to transnational health threats. Malaria is the core concern in GHG for governmental and non-governmental actors. Organisations such as the WHO and the Global Fund to Fight AIDS, Tuberculosis and

Malaria (GFATM) have supplied strategic guidance and implementation frameworks, including the Global Malaria Action Plan, and “Roll Back Malaria.” Launched in 1998 by WHO, UNICEF, UNDP and the World Bank, the Roll Back Malaria (RBM) initiative sought to synergise efforts and resources in combating malaria (Feachem, 2018). At the time, malaria was highly prevalent in Africa and Southeast Asia affecting an estimated 3.2 billion people and causing direct economic losses up to USD 12 billion annually. In the Mekong River Basin, recurrent spread and rising of drug resistance posed especially formidable challenges (World Health Organization & UNICEF, 2005).

The RBM initiative marked the world’s first comprehensive strategic blueprint targeting a single disease. It has provided global health goods – policy guidance, medical support and financial aid – fostering cooperative actions among countries to implement malaria elimination and raise disease awareness. Its strategic priorities include early detection and prompt treatment; strengthened pathogen control; maternal health education; focal interventions during emergencies or outbreaks; and support for innovative prevention tools, technical research and standardisations (World Health Organization, 2000). Initially UN-led programme, RBM has evolved into a global partnership comprising malaria-endemic countries, UN authorities, bilateral and multilateral agencies, NGOs, academia, private sector and philanthropic foundations (Atta & Zamani, 2008). Its governance structure consists of regional networks, national partnership advisers, high-profile advocates and technical working groups formulating consensus on best practices. Oversight is provided by the board of directors, with a secretariat at the WHO headquarters coordinating partner contributions and needs (Traoré, 2005).

Because large-scale malaria control requires substantial, sustained financing beyond the capacity of most malaria-endemic countries, RBM has collaborated with the GFATM and the Bill & Melinda Gates Foundation (BMGF) to mobilise targeted resources overcoming chronic funding gaps. This endeavour has elevated malaria as a visible policy priority within health and socio-economic agendas (Coll-Seck, 2008), facilitating both near-term control programmes and long-term eradication ambitions through stakeholder collaboration, technological innovation and strategy refinement via broad social consensus. The initiative’s headline objective was to halve global malaria mortality by 2010 and to achieve an additional 50% reduction by 2015 (The Lancet, 2008).

Despite the impetus from global initiatives, initial results in the Mekong Countries were limited. The distribution of standardised medications, diagnostics and clinical service beyond urban centres remained challenging, leaving malaria in a high-risk oscillation. Until 1999, the Mekong Roll Back Malaria Initiative – jointly launched by the UN, WHO, World Bank, USAID and the Mekong governments – tailored the global RBM campaign to the regional context. The Mekong RBM Initiative has generated localised data, developed treatment protocols, introduced rapid diagnostic tools, and enhanced institutional cooperation to build durable disease-management capacities (World Health Organization, 2006). It specifically targeted vulnerable populations, including impoverished communities, ethnic minorities and migrant labourers in remote areas, addressing gaps in health information and service delivery. The initiative aimed to

reduce malaria mortality in the Mekong subregion by 50% from 1998 levels by 2010 and curb the spread of drug-resistant malaria strains (Asian Development Bank, 2000).

Even so, overreliance on top-down guidance and externally driven capacity-building is insufficient. Coming to the era when global major powers are unable to assume leadership and reluctant to underwrite a reliable supply-demand system for global health goods, GHG risks falling into the “Kindleberger Trap”² (Campbell & Doshi, 2020). In this context, the cultivation of governance elements within regional frameworks becomes vital, particularly in the Mekong Countries where infectious diseases are prevalent and preventive infrastructure is comparatively weak. Thus, regions have emerged as ideal strategic meso-level governance spaces between the national and global levels, capable of tackling shared challenges, managing interdependence and delivering collective public health goods.

4.2. The regional level: Cooperation in infectious disease prevention and control under the expertise-based network structure

The Mekong Countries have participated in GHG since the late 20th century, gradually establishing professional networks of public health experts across the region. These networks comprise scholars, medical personnel and officials from central authorities and local health departments. A defining feature is their capacity to rapidly acquire up-to-date information, concepts and techniques from external sources, leveraging professional expertise to secure policy and operational support internally (Manzoni et al., 2024) and to curb misinformation. Through sustained peer interaction, these experts have facilitated the exchange and consolidation of field knowledge and health policies, deepened mutual trust, and expanded the scope for collaborative actions. This dynamic not only exemplifies the essence of knowledge as a GPG but also aligns with core strands in International Relations, regarding the intellectual notion of “expert consensus” and the classical paradigm of “epistemic communities”.

Ikenberry (1992) argues that the formation of transnational agreements rests on expert consensus among specialists in professional fields. The expert agency shapes governments’ rational perceptions of interests and contributes to the construction of new power coalitions. On issue-specific agendas, experts’ policy perspectives are typically built upon a robust knowledge base, and the complexity of such issues amplifies their dominant role. As mechanisms and priorities have diversified, GHG has gradually centred on the principle of “evidence-based science decisions” (Kentikelenis et al., 2023), further magnifying the agenda-setting power of expert consensus.

Epistemic community originates from the confluence of bureaucratic positions, technocratic expertise, shared disciplinary training and collective behavioural expectations, intentions and norms, synergising the institutionalised cognitive architecture in

² The *Kindleberger Trap* refers to the notion that the stability of an international system requires the presence of a hegemonic power – one capable of providing GPG for upholding international order, such as international reserve currency and collective security. When the existing hegemon retreats from its commitments, the resulting power vacuum tends to undermine the effectiveness of global governance and exacerbates systemic instability.

international society. Haas (1992) defines an epistemic community as a transnational network of experts widely recognised within fields for their knowledge and technical competence. Through authoritative discourse on specific themes, epistemic community helps construct transnational order grounded in knowledge-based norms, thereby shaping the national policy outcomes. Cross (2013) emphasises that professionalism serves as the driving force behind epistemic-community behaviour, while uncertainty – particularly during crises – acts as the endogenous force heightening its influence.

From the GHG perspective, the uncertainty of power dynamics and the challenges posed by regional expert networks to prevailing distributions of public health goods create opportunities for reshaping governance via transgovernmental interactions within health-focused epistemic communities. Alternatively, the complexity of policymaking and the interconnectedness of specific domains frequently necessitates the inclusion of multidisciplinary professionals and relevant agencies. For instance, effective epidemiological investigation inevitably requires the involvement of law enforcement, while transboundary environmental governance entails coordination between ecological, environmental and economic policy actors. As epistemic communities evolve, their membership tends to broaden and consolidate, incorporating actors from diverse backgrounds. In the regional public health sphere, the strategic mobilisation of expertise to establish new professional norms, design alternative institutions, and foreground “civilisational diversity” has emerged as a plausible pathway to alleviate the Kindleberger Trap in GHG, particularly amid intensifying great power competition (Cooley et al., 2015). Acharya (2011) argues that epistemic communities can function as “filtering” mechanisms beneath formal international decision-making, identifying locally applicable policy options that strengthen both feasibility and legitimacy.

In the Mekong Countries, public health expert networks were initially informal, with a small number of expert panels in each country. Consequently, there was a significant overlap among individuals participating in multiple networks for joint tasks and exchanges. Over time, institutionalisation followed. In 1996, under the initiative of the Ministry of Health of Thailand, the Asian Collaborative Training Network for Malaria (ACT Malaria) was established. Its membership encompasses ASEAN – particularly the five Mekong Countries – alongside Timor-Leste and China. With WHO financial support, ACT Malaria enhanced its institutional architecture in 1999 by setting up the permanent secretariat in Bangkok and adopting a rotating leadership system. ACT Malaria pursues two primary objectives. First, to build an expert network of malaria specialists from member states and WHO personnel responsible for training and technical guidance – fostering capacity building among grassroots health workers, disseminating control methods and information, and facilitating the uptake of new technologies. Second, it promotes exchanges among member states on malaria control in border areas. The initiative has incorporated external actors such as international donors and pharmaceutical enterprises, laying a well-rounded foundation for subsequent infectious disease prevention and control in the region (World Health Organization, 2022a).

By the late 20th century, epidemiologists in the Mekong Countries had recognised pronounced disparities in medical and public health standards, as well as obstacles to horizontal exchange of sensitive epidemic information. In response, the Mekong Basin

Disease Surveillance (MBDS) system was launched in 2001. MBDS monitors communicable diseases, including malaria, and facilitates interstate data sharing. Its surveillance scope covers infection rates, outbreaks severity and the spatial characteristics of disease clusters, with the overarching goal of mitigating basin-wide transmission risk. The advantage of MBDS lies in its constituents of national coordinators, typically senior public health officials. As cooperation deepened and issue complexity grew, the national coordinators have cultivated close working ties and become well-acquainted with their transgovernmental counterparts (Slaughter, 2004). These interfunctional interfaces and interpersonal linkages have strengthened the effectiveness of MBDS's trust-based network and integrated regional health governance practices into coordinators' respective homelands. Notably, MBDS has set up cross-border stations bringing together health, customs, immigration and border security officials to coordinate healthcare and epidemic prevention policies at the regional level (Phommasack et al., 2013).

In a similar vein, based on the long-standing cooperation, the Mekong Countries and China officially launched the Mekong Malaria Elimination (MME) programme in 2017 – an initiative involving upstream and downstream constituents of the entire drainage system³ to coordinate efforts toward eliminating all malaria pathogens. The core focus of MME includes promoting dialogue and partnerships, optimising technical support for regional and interregional projects, conducting monitoring activities, and assisting countries in strengthening national elimination intensification plans (World Health Organization, 2022b). The programme's cornerstone is the Malaria Elimination Database, a regional platform that collects, compiles and issues monthly malaria data from subnational health units, using 2010 as the baseline for statistical trends. Access to the MME database enhances surveillance and assessment capabilities, supports analysis of distribution hubs and transmission trajectories, and facilitates knowledge diffusion through publications such as epidemiological summaries and annual bulletins (Delacollette et al., 2009). Importantly, in both geographical and institutional scope, malaria cooperation between the Mekong Countries and China exemplifies the governance concept of “interregionalism” – an emergent mode of spatial governance involving regional groupings and external powers that transcends strictly regional boundaries (Gardini & Malamud, 2018). At the same time, as the predominant actor within the interregional cooperative configuration, China is able to coordinate and support comparatively weaker Mekong partners, helping to offset regional capacity disparities and mitigate collective action dilemmas that would otherwise arise in a single region.

Since the 2000s, the Mekong Countries have collaborated on a therapeutic efficacy monitoring network comprising 32 sentinel sites across the basin. The network tracks antimalarial drug resistance through *in vivo* testing (World Health Organization, 2007). In 2014, with funding from the GFATM, the Regional Artemisinin-resistance Initiative

³ In terms of natural geography, the Mekong is a transboundary hydrological system of the upstream–downstream type formed by the convergence of numerous tributaries. Based on hydrological characteristics and topographical structure, it is conventionally divided into the Upper Mekong, referring to the Lancang River Basin, and the Lower Mekong, generally known as the Mekong River Basin. The area ratio of the two catchments is approximately 1:4. The Lancang River segment within China extends to 2,139 kilometres, while the Mekong River section flowing through the five downstream countries covers a total length of 4,880 kilometres.

(RAI) was launched to strengthen detection and mitigating mechanisms for drug-resistant malaria in the Mekong Countries (RAI Regional Steering Committee, 2023). The aforementioned cases demonstrate that the Mekong Countries have actively embraced collaborative approaches to addressing infectious disease challenges. Through regional interactions, public health experts have constructed a dense governance network for prevention and control – rooted in shared knowledge and mutual trust – that bridges information and implementation, facilitates the propagation of healthcare technologies and standardisations as global public goods, and ultimately advances complex health governance at the regional magnitude.

4.3. The national level: Cross-border joint control and collaborative governance in the relational perspective

Since the 21st century, the Mekong Countries have reached a concord in that effectively controlling the cross-border spread of infectious diseases requires a joint disposition mechanism, as well as an information-sharing platform with neighbouring states. In response, the five countries have enhanced corresponding domestic malaria elimination policies and engaged in bilateral collaborative governance (Hewitt et al., 2013).

The bilateral approach highlights the logic of relationality as the key determinant of national-level health governance, with practices shaped by socially embedded relationships. Compared with global and regional arenas, national-level relational networks in the Mekong context exhibit denser, more explicit connections – an interplay of environmental uncertainty, shared motivations and joint-action capacity fostering stronger collaboration (Emerson et al., 2012), with the social nature of relational processes being particularly salient. Over the past two decades, the cross-border joint prevention and control of malaria have been a mainstream feature of national-level health governance across the Mekong Countries, progressing alongside localised and neighbourhood expert networks initially, evolving through phases of establishment, expansion and maturity.

For instance, Cambodia and Thailand pioneered cross-border cooperation (Khamsiriwatchara et al., 2012), strengthening surveillance and vector control ensuring timely and medical access to artemisinin-based combination therapy (ACT) for populations in both countries. Both governments have actively supported community-based epidemic prevention through information and education campaigns, convened regular bilateral technical conferences between national malaria programmes, and issued unified messages concerning mobile and migrant populations. Malaria control initiatives have been formally incorporated into the Thailand–Cambodia Health Development Cooperation Programme, which has standardised infectious disease management through joint training in surveillance and emergency response for healthcare personnel, while maintaining robust intergovernmental communication channels. On the eastern frontier, Vietnam and Laos collaborate in mountainous, forested border provinces inhabited by ethnolinguistically related minorities. A systematic mechanism for exchanging surveillance data enables joint tracking of transmission in the grand remote areas. Additionally, Vietnam

provides Laos with critical public health goods, such as insecticide spraying and ACT medications, to tackle cross-border healthcare resource disparities (Pongvongsa, 2012).

Through interventions operating across multiple levels, the Mekong Countries have partially alleviated the socio-economic burden of malaria by coalescing around the provision of GPG. Yet classic collective action dynamics of public goods would typically predict a chronic capability–legitimacy gap (Acharya, 2012) regionally, wherein incentives for specific state actors to free-ride, uneven institutional strength, and coordination failures undermine sustained cooperation. The Mekong experience shows that constraints have been moderately attenuated through a functional division of labour within GHG architecture. International actors and institutional frameworks help consolidate legitimacy by providing policy guidance, technical standards, and – most crucially – sustained financing that endemic states often cannot mobilise independently. On the other hand, national and bilateral health infrastructures and initiatives augment the capacity dimension by translating basin-wide externalities into tractable, recurrent cross-border interactions, enabling more precise resource allocation and risk reduction in borderlands, even when wider multilateral cooperation at times proves geopolitically fragile. Currently, Thailand and Vietnam, as subregional leaders in elimination, are actively identifying and targeting residual transmission hotspots, combining case detection with focal vector control and appropriate antimalarial therapy to interrupt active foci (Mueller et al., 2022). Meanwhile, Cambodia and Laos are implementing the “Last Mile to Malaria Elimination” roadmap to accelerate progress (Sovannaroeth et al., 2022). In Myanmar, bilateral collaborations with neighbouring partners have established a Cross-Border Malaria Elimination Zone (Xu et al., 2016), supported financially by Cambodia, Thailand and China. The approach has laid a foundation for sustained prevention and control by securing stable funding and reliable health-system infrastructure, which are prerequisites for reducing incidence and halting transmission within the country.

Moving beyond the past marked by conflict-prone interactions and weak technopolitical coordination, the Mekong Countries have increasingly responded to health securitisation through joint interstate control and collaborative governance. This evolution illustrates the tandem “development–security” nexus underlying the pattern of contemporary security governance – the dual-track dynamic reveals where security serves as a prerequisite for development, and development, in turn, reinforces security (Hettne, 1997). Ultimately, aligning the mutually constructed evolving logic of development and security within the framework of GHG should become a core task for all Mekong Countries.

5. Theoretical reflections and empirical implications

The Mekong River basin is one of the most active regions in the world for the formation of cooperation and development mechanisms. Over recent decades, state and non-state actors from within and beyond the basin have launched numerous initiatives and governance frameworks spanning multiple development dimensions. This trend has driven the rapid proliferation of mechanism constructions in the region while intensifying competition among states and their lead institutions, giving rise to the

depicted phenomenon of “institutional congestion” (Pich, 2022). At the same time, as outbreaks of existing and emerging infectious diseases continue to pose challenges to humanity, the remit of health governance has expanded beyond the mere formulation of public health strategies or the establishment of medical systems within a single spatial domain. Instead, it now embraces a range of actions undertaken by actors including scientific community, political authorities and the public – across routine and emergency contexts, multiple issue areas (science, economics and society), and multifaceted spatial levels (global, regional and national) – with the shared aim of safeguarding health. Public health governance is not a static entity but rather a dynamic, evolving process. Compared to traditional governance models focusing on the diffusion and enforcement of international rules, GHG – rooted in GPG approaches as manifested in malaria control agendas – exemplifies an innovative, multi-dimensional and multi-level governance complex (see Figure 3).

Cooperation on infectious disease prevention and control among the Mekong Countries has achieved progress from its initiation through stages of development. This process serves as a practical example for navigating the complexity of GHG, which involves a diverse constellation of actors. Collectively, these actors constitute partnership networks that underpin the delivery chain flow of GPGs and facilitate spatial implementation centred on fulfilling healthcare supply and demand circulation within an actor–recipient nexus – denoting multilevel providers to recipient systems and populations, encompassing downstream flows of rules, knowledge and resources, and upstream feedback whereby field

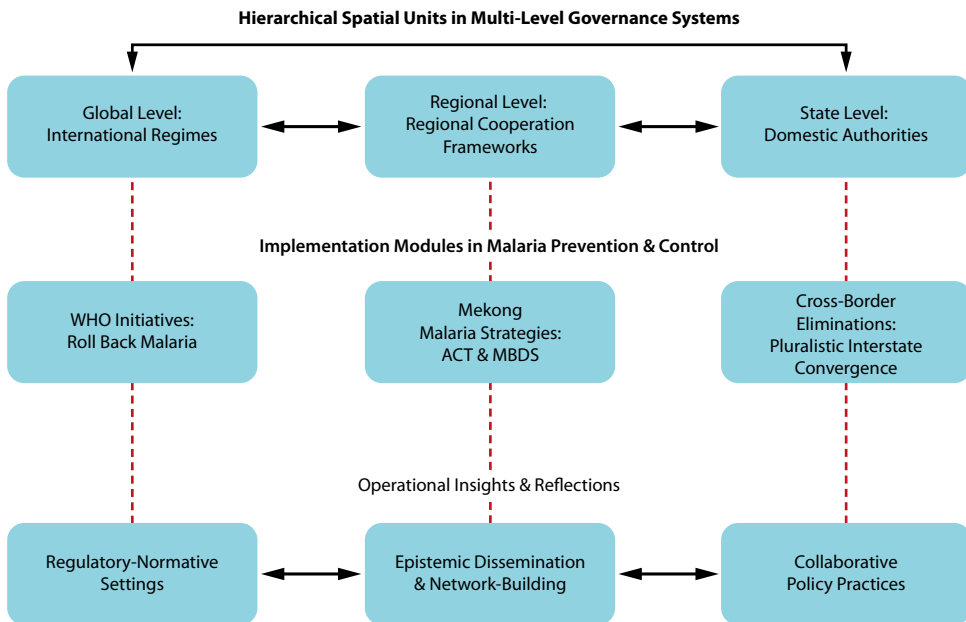


Figure 3
Multi-level malaria governance architecture in the Mekong region

Source: Compiled by the authors.

uptake, constraints and epidemiological signals recalibrate design, allocation and coordination. At the global level, health regulations, frameworks and goals set up by the international community constitute the “institution-based GPGs”, which are then operationalised and disseminated to the lower tiers. At the regional level, social networks of public health and epidemiological expertise comprising professionals and technical authorities in the Mekong Countries who are conversant with international standards and advanced treatment protocols, play a crucial role in granting the “knowledge-based GPGs”. Besides, transgovernmental coordinators and liaisons familiar with international norms and regulatory mechanisms help bridge global–regional interfaces, translating knowledge-based public goods into real-time policy decisions and practices, thereby shaping the regional and interregional coordinating authorities.

At the national level, tangible “resource-based GPGs” are manifested through the complementarity and interoperability of public health infrastructure. In this context, stronger states assist weaker counterparts as credible “hub” providers that stabilise essential provision over time, thereby creating a coherent mechanism for tempering collective action impediments. Furthermore, frontline physicians and healthcare workers familiar with local conditions adapt regulations and standards into localised solutions to meet the needs of endogenous circumstances. Notable examples include the “8-day course” of primaquine regimen, identified by Mekong-based experts through practical experience, which has proven to be more cost-efficient and better accepted by local populations compared to the WHO-recommended 14-day course because of its shorter duration, lower cumulative dosage and reduced side effects (Taylor et al., 2019). Another example is the China-led “1–3–7” malaria surveillance and response approach, carried out in the Mekong Countries for pathogen source investigation and rapid intervention (Aung et al., 2020). These reformed methods and their successful implementation feed back into and enrich the existing regional and global system, becoming integral components of the holistic GHG.

For instance, building on extensive consultations involving malaria programme officials from health authorities of the Mekong Countries and other relevant stakeholders – with support from the WHO Regional Office for South-East Asia and the Western Pacific, as well as the WHO GMS Antimicrobial Resistance Emergency Response Regional Center – the WHO subsequently launched the “Strategy for Malaria Elimination in the Greater Mekong Subregion 2015–2030” (World Health Organizations, 2015). Aligned with the organisation’s 2015 Global Technical Strategy for Malaria, the 2015–2030 strategy marks a milestone culmination of multi-level collaboration in GHG.

6. Conclusion

Over the past few years, the world has experienced the most severe pandemic in a century, which not only claimed millions of lives and undermined global health, but also inflicted a heavy blow on the world economy and intensified geopolitical risks. The scale and magnitude of its impact have even surpassed those of traditional political and economic security threats. In the aftermath of such disruption, the international community must now pursue more comprehensive and systematic thinking on

advancing plurilateral cooperation and governance mechanisms for infectious disease prevention and control in the post-Covid era.

In summary, health-associated governance issues derived from the recognition of public health as a public good carry greater significance than the solely availability-focused concerns of public health goods, particularly in global regions characterised by heterogeneous social, historical and cultural contexts, as well as uneven extents of national development. Evidence from the Mekong Countries yields critical findings. International frameworks supply indispensable standards, financing logics and legitimacy, yet seldom secure implementation in peripheral settings. Regional networks serve as the translation layer, converting global inputs into shared technical repertoires, harmonising surveillance and sustaining trust-based coordination across jurisdictions. Infrastructures among nations turn the foregoing deliverables into operational capacity and generate feedback that recalibrates regional and global designs. Overall, multi-level governance architecture emerges as a central determinant of GPG/GHG performance.

Nevertheless, scholarships on the complex public health governance models remain in its nascent stage, further exploration is especially warranted to facilitate a metatheoretical transition from the provision of GPGs to the governance of GPGs. Within this process, it is essential to clarify the ontological and definitional divergences that persist between academic theorisation and practical implementation in the field of GHG. Moreover, acknowledgment must be given to the catalytic function of external actors in shaping GHG responses to transnational health challenges. This entails examining how the proactive engagement of both state and non-state actors can be optimally integrated with the establishment of rule-based, technically oriented institutions. Such integration is vital to enhancing the effectiveness and sustainability of governance – particularly in regions where state capacity in public health realm is relatively limited. From the macro perspective encompassing human health survival, security and development, this is a research area which holds noteworthy academic attention due to its practical relevance.

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Political Economic Cycles in Electoral and Non-Electoral Years in Local Government in Portugal

A Case Study

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Abstract: This article aims to assess the existence of opportunistic behaviour among mayors during election years within the framework of Political Economic Cycles (PEC). Therefore, the trajectory of some public expenditure over four electoral cycles is analysed in the municipalities belonging to the Intermunicipal Community of Beiras and Serra da Estrela (CIMBSE) in Portugal. The study covers the period from 2008 to 2022 in a data panel that encompasses the fifteen municipalities belonging to CIMBSE. The data includes total, current, capital and investment expenditure, and it has been statistically analysed to compare spending trends in election years and non-election years. The empirical tests carried out showed the existence of opportunistic behaviour among mayors during election years, manifesting itself in terms of municipal spending, namely total and current spending, both overall and per capita. Nevertheless, no cases of opportunistic behaviour have been identified with regard to capital and investment expenditure.

Keywords: local finances, municipal budget, Political Economic Cycles, electoral cycles, public expenditures

1. Introduction

Though there is no consensus on the origin of municipalities, it is clear that they play a fundamental role in the governance of the state and the functioning of society, and they establish a crucial proximity between economic agents and the population. Local government is widely recognised as a key driver of economic growth and business activity, which is well illustrated by its resilience in the face of regime change, maintaining levels of organisation and administration over several centuries.

In Portugal, local autonomy is regulated by the Constitution,¹ which endorses the principle of administrative decentralisation and financial autonomy in accordance with Articles 237 and 238. It is in this context that this article seeks to consider whether this autonomy is being well managed by political decision-makers. And by being well managed, we understand their actions being guided by the criteria of efficiency and economy (Rodrigues, 2021).

Financial autonomy gives local governments the freedom to manage their assets and finances without interference. In Portugal, the current system of municipal budgeting is regulated by the so-called Local Finance Law.²

In the full exercise of their competences, and given the financial autonomy they enjoy vis-à-vis central government, local authorities are required to draw up an annual budget. This document must systematically set out the revenue forecasts and expenditure allocations to be implemented throughout the financial year. However, as the budget is a provisional instrument and, by nature, dynamic, it is accepted that, during its implementation, adjustments may be made to the amounts initially entered, whenever circumstances so warrant (Félix, 2020).

These mechanisms ensure fiscal adaptability and allocative efficiency, while safeguarding transparency, accountability and compliance with public finance law.

However, studies have shown that the performance of municipalities in public finances is influenced by political cycles as well (Veiga & Veiga, 2004). Different objectives of political agents in conducting public spending in PEC have been discussed, giving rise to two major trends in the literature. The opportunistic aspect of PEC was developed by Nordhaus (1975), Rogoff and Sibert (1988), and Rogoff (1990), who proposed that public resources would be used to re-elect the manager. And the opposing view was presented by Hibbs (1977) and Alesina (1987), who argued for the existence of partisan PEC. In this model, public spending would be directed towards agendas prioritised by specific electoral groups, to ensure party succession in elections (Correia & Casonato, 2018). Although these dynamics have been subject to intensive study, with reference to Portugal, there is very limited analysis.

It is for this reason that this study aims to analyse whether electoral cycles in local governments translate into changes in budget management, i.e. whether mayors engage in

¹ Constituição da República Portuguesa. Online: <https://www.parlamento.pt/legislacao/documents/constpt2005.pdf>

² Law n.º 73/2013 of 3 September, updated by Law n.º 82/2023, Chapter V of 29 December. Online: <https://diariodarepublica.pt/dr/detalhe/lei/-835864042-836144091>

electioneering behaviour during election years by manipulating total, current, capital, and investment expenditure to signal a higher level of competence to the electorate.

The empirical study analyses the expenditure of all the 15 CIMBSE municipalities between 2008 and 2022. CIMBSE is located in the Central Region of Portugal, covering a vast area along the Spanish border, and it comprises of 15 municipalities, namely: Almeida, Belmonte, Celorico da Beira, Covilhã, Figueira de Castelo Rodrigo, Fornos de Algodres, Fundão, Gouveia, Guarda, Manteigas, Mêda, Pinhel, Sabugal, Seia and Trancoso. It is experiencing demographic decline and low population density, where demographic ageing continues to accelerate. In terms of its economy, it has also been losing ground at national level, with a competitiveness index below the national average, a predominance of micro-enterprises, and also with a cohesion index below the national average (Marques et al., 2022).

We have selected the CIMBSE region as the subject of our study because it provides an ideal framework for testing hypotheses related to electoral cycles, and because no prior study has been conducted with reference to budgetary management on the region (for an analysis of demographic and socio-economic aspects see Marques et al., 2022).

Though doubtlessly the article has certain internal limitations, we believe its findings remain relevant. It contributes to a broader understanding of the functioning of local executive and political bodies by examining whether these institutions exhibit electoral behaviour during election years. In particular, the study aims to assess whether there is evidence that local policymakers strategically adjust public expenditure, namely total, current, capital, and investment spending during electoral periods as a means of signalling greater competence to the electorate.

2. Literature review

2.1. Political economic cycles

The idea that economic performance is manipulated by political objectives is one of the most controversial and relevant themes in contemporary economic analysis. The relationship between the economy and the political system has long been a topic of interest to economists, as political decisions have a natural impact on economic policies and consequently on economic performance (Snowdon & Vane, 2005).

Several studies associate economic fluctuations to political events, proposing the existence of a nexus between the electoral calendar and economic cycles (Preussler, 2001). This approach to economic cycles is known as the PEC theory. It studies the existence of manipulation of economic variables during pre-election periods to influence voters' decisions (Castro et al., 2016). Different approaches to this theory have emerged, with some studies considering only opportunistic aspects and others including the possible ideological aspect of manipulation in their analysis. But the PEC theory has its origin rooted in the works of Marx, Keynes and Schumpeter (Coelho, 2004).

Marx (1887) argued that the dominance of the capitalist class over the working class generates cycles of economic expansion and depression. In turn, Keynes (1936)

demonstrated that government can manipulate the economy through the use of monetary and budgetary policies. Finally, Schumpeter (1939; 1942) acknowledged that political factors are implicit in economic fluctuations, proposing instead a model in which political elites compete in a “political market” for voters’ support, with the primary aim of gaining and maintaining power.

Research into the behaviour of economic policymakers in relation to the electoral calendar began with the work of Downs in the 1950s. Downs (1957) states that in a democracy, political parties formulate policies primarily to win votes, serve interest groups, and formulate policies to gain power. Thus, in a democracy, the government’s social function of formulating and executing policies is fulfilled as a by-product of its private motive of gaining income, power, and prestige from being in office. This hypothesis suggests that the government always acts to maximise the number of votes it will receive (Downs, 1957). According to Downs (1957, p. 137), the government “is a company that sells policies for votes rather than products for money”. And he assumes that voters act rationally, i.e. each person sees elections as a method of selecting the government that will benefit them most.

Following Downs’s critique in the mid-1970s, the discussion on PEC began. The opportunistic theory (Nordhaus, 1975), emerged, giving rise to the opportunistic model. Since then, a significant amount of literature has been published to test models that verify the aforementioned theory (Fernandes, 2015).

2.1.1. Nordhaus’s opportunistic model

Nordhaus’s (1975) study investigates a simple model of public intertemporal choice in which decisions are made within a political framework. The specific problem analysed is the choice between inflation and unemployment. In other words, the opportunistic model proposes a macroeconomic trade-off between inflation and unemployment, demonstrated by the Phillips curve (Nordhaus, 1975).

Nordhaus (1975) assumes that economic agents have the aggregate rates of unemployment and inflation in their preference functions and that they prefer stable prices and low unemployment rates to high inflation and unemployment rates, i.e. they follow expansionist policies that generate economic growth and low levels of unemployment. This fact, combined with the ‘short-sightedness’ of the electorate, creates favourable conditions for the government to maximise its chances of re-election (Azevedo, 2012). After the elections, the government is faced with a high inflation rate and implements austerity measures, which increase unemployment (Nordhaus, 1975).

The manifestation of the PEC proposed by Nordhaus (1975) can be seen when the unemployment rate falls over the course of the mandate, but immediately after the elections, the elected leader pushes the economy to the right of the Phillips curve, increasing the unemployment rate to combat inflation and change voters’ inflation expectations. It turns out that, even at the time of the elections, if inflation is high, the incumbent will be able to be re-elected, since voters only have to be satisfied with the low unemployment rate, according to the Nordhaus model (Siqueira, 2016).

The Nordhaus model (1975) provoked various reactions, which were eventually criticised based on empirical theory. With the rational expectations revolution came the rational model.

2.1.2. The rational model

The basic notion behind the so-called 'rational models' of political cycles suggests that rational behaviour on the part of the public, particularly the voters, implies a perfect understanding of the political-economic environment, leading in the long term to an anticipation of the government's actions and decisions, which would consequently result in the adjustment of expectations as the public anticipates them, which would make it impossible for longer political cycles to exist (Fialho, 1999). There is no short-term Phillips curve that political decision-makers can exploit.

The first two contributions to the field of rational expectations theory were put forth by Rogoff and Sibert (1988) and Rogoff (1990), both following Nordhaus's assumptions and extending the opportunistic model to incorporate rational expectations.

Over the years since the PEC theory was established, numerous studies have been conducted across different countries, providing evidence of political opportunism in the context of re-election incentives. Table 1 summarises the main conclusions drawn from the studies analysed below.

Although not directly related to public expenditure, Stein and Streb (2004), in their study of the rational political budget cycle (RPBC) model for an open economy, highlight the role of elections in shaping the timing of nominal exchange rate movements. Their framework extends previous models in two main ways: first, by incorporating the effects of elections on exchange rates, previously overlooked in closed-economy settings, and second, by introducing incomplete information not only about government competence but also about its degree of opportunism. This results in a partially pooling equilibrium in which opportunistic and less competent governments deviate from optimal policies, reducing devaluation rates prior to elections and increasing them afterwards.

The study by Drazen and Eslava (2010) develops a political budget cycle (PBC) model in which incumbents seek to influence voters by altering the composition of public spending rather than its overall level. The authors argue that rational voters may still support incumbents who increase targeted spending before elections, as such actions can signal both opportunistic behaviour and genuine policy preferences. Using data from Colombian municipalities, the findings reveal a clear pre-electoral increase in targeted expenditures, accompanied by a reduction in other categories of spending, as well as a positive voter response to these targeted allocation strategies.

The significant impact of electoral systems on fiscal policy has been analysed by Persson and Tabellini (2003), who show that majoritarian systems tend to produce smaller welfare states, lower levels of public spending, and reduced budget deficits compared to proportional systems. According to these authors, empirical evidence supports these predictions indicating that a shift from proportional to majoritarian rules can substantially decrease government expenditure, welfare spending and deficits as a share of GDP.

Table 1
Summary table, political economic cycles

Authors	Main conclusions
Rogoff and Sibert (1988)	They concluded that with information asymmetry, politicians have a lot of information that voters do not have, and this time lag creates opportunities for electoral manoeuvres.
Rogoff (1990)	In order to appear competent, political decision-makers tend to prioritise more visible programmes and transfers over public investment, i.e. the visibility of public spending is particularly associated with current expenditure rather than capital expenditure.
Blais and Nadeau (1992)	Total spending and the deficit increase slightly in an election year. Specific areas indicate that a substantial part of this extra spending goes to social services and roads.
Rosenberg (1992)	He concluded that the manipulation of public spending could be aimed at increasing employment opportunities in the private sector or even transferring rewards.
Schuknecht (1998)	In conclusion, increases in public spending are the favoured vehicle for policymakers to boost their popularity ahead of elections. Public investment spending is the favoured policy of a cross-section of developing country governments seeking re-election.
Block (2001)	The results indicate that in an election year, public spending shifts towards more visible current expenditure and away from investment spending.
Shi and Svensson (2006)	They concluded that the budget deficit increases by one per cent of Gross Domestic Product (GDP) during elections, and political budget cycles are greater in developing countries.
Alt and Lassen (2006) (cited by Klein & Sakurai, 2015)	They concluded that election-year deficits are higher in developed countries.
Katsimi and Sarantides (2012)	The authors conclude that elections shift public spending towards current expenditure to the detriment of public investment.
Balaguer-Coll and Brun-Martos (2013)	The results show that, in general, increases in local public spending, particularly increases in capital spending, have a positive effect on the likelihood of re-election.
Castro and Martins (2018)	They concluded that the components of public spending identified as being significantly manipulated in election years are: public services, education, social protection and some items of health expenditure.
Wyse et al. (2022)	The results suggest that opportunistic political cycles increase the effect of spending on municipalities' public debt. However, it can be said that the effect is more significant in pre-election years.

Source: Compiled by the authors.

Overall, electoral rules are identified as a key determinant of fiscal outcomes in modern democracies, with institutional reforms likely to lead to significant changes in the size and scope of the public sector.

Recent contributions to the literature on PBC reinforce the persistence and diversification of these dynamics in contemporary contexts. For instance, Asatryan et al. (2026) show that governments may rely on a broader set of fiscal instruments, including state-owned enterprises, to influence electoral outcomes. Similarly, Shmuel (2025) finds that PBCs tend to be more pronounced under populist leadership, particularly in weaker institutional settings. In addition, Budzeń and Wiśniewski (2023) provide empirical evidence at the local level, confirming the existence of such cycles and their effects on the financial structure of municipal governments.

2.2. Political Economic Cycles in Portugal at the local level

In PEC models at the local level, budgetary policy is the most important financial instrument for signalling competence to voters (Miguel, 2020). The fact that the provision of local public goods is the fundamental economic activity of local authorities means that these activities play a central role in influencing budgetary policy (Cardoso, 2012).

Of the few studies on PEC in local government in Portugal, the most important is that by Baleiras and da Silva Costa (2002; 2004), who propose a new explanation for PEC: the incumbent's concern for their own well-being in the event of victory or defeat. Political officeholders who are not re-elected generally have no prospects of being hired for other positions in the public sector. These political decision-makers will have to find a job if they are not re-elected. Therefore, rational public office holders will take external income into account in their budgetary decisions (Baleiras & da Silva Costa, 2002). According to Baleiras and da Silva Costa (2004), the study's data highlights the role of political and economic determinants of local government investment spending, such as the electoral calendar, re-election decisions, political cohesion and intergovernmental capital transfers. The study concluded that the majority of local investment goes towards highly visible infrastructure: roads, sewers and water pipes, social empowerment, schools and sports. It follows that the manipulation of public spending also aims to increase employment opportunities in the private sector by transferring funds to companies through the award of contracts.

This was followed by the studies of Veiga and Veiga (2004), who analysed the existence of PEC in the budgetary policies of municipalities in mainland Portugal between 1979 and 2000. The findings reveal the presence of opportunistic behaviour among mayors who, in the run-up to elections, seek to signal greater competence by increasing public spending, particularly in categories that are highly visible to the electorate, notably investment-related expenditure. There is a clear intention on the part of mayors to gain popularity before the elections, which confirms the existence of PEC.

The study carried out by Veiga and Veiga (2005), in addition to the expenditure mentioned in Veiga and Veiga (2004), adds the variable of local employment. They assess the impact of political factors on employment in Portuguese municipalities, finding significant effects particularly in sectors related to construction and public works. In short,

Portuguese mayors manage economic policy instruments and try to improve the performance of the local economy (which translates into an increase in municipal employment) to demonstrate greater competence before elections.

Coelho et al. (2006) also analysed municipal employment using an unexplored dataset covering all municipalities on the continent between 1985 and 2000. They found strong evidence of PEC. Employment increases just before elections. Employment increases are particularly high in the construction and public works sector, as well as in community, social and personal services. By improving local economic conditions just before elections, mayors can signal their competence to voters and increase their chances of re-election.

In Portugal, increases in investment spending and changes in the composition of spending that favour highly visible items are associated with higher vote shares for incumbent mayors seeking re-election (Veiga & Veiga, 2007). The results, therefore, clearly support the hypothesis that opportunism pays off.

In 2011, Aidt et al. (2011) proposed a new model in which they investigated the implicit bidirectional interaction between the importance of opportunistic distortion and the margin of victory. The results show that opportunism pays off, leading to a greater margin of victory for the public office holder.

Since mayors have less control over municipal revenues, it is easier and more predictable to manipulate expenditure items, which are then more susceptible to political manipulation (Rodrigues, 2021). Therefore, and in line with PEC theory, it is important to note that the measures adopted by local governments to maximise political popularity with a view to re-election are associated with the manipulation of public resources (Rodrigues, 2021).

3. Methodology

This study aims to analyse the variations in current, capital, total, and investment expenditure in the electoral and non-electoral years of the 15 municipalities belonging to CIMBSE to determine whether there is evidence to support the presence of political budget cycles (PBC), during four election periods in Portugal: 2009, 2013, 2017 and 2021. It should be noted that elections were held in 2025, but it is not possible to include the most recent electoral cycle because the data on the various types of expenditure for the year 2026 are not yet available from the DGAL. For this purpose, the period from 2008 to 2022 was considered, covering the different types of expenditure of the CIMBSE municipalities.

The relatively small sample size is justified by the high degree of homogeneity among the 15 municipalities within the CIMBSE, as they share similar socio-economic, demographic, and geographic characteristics typical of inland regions, ensuring the validity and consistency of the findings.

The budget data relating to each municipality's expenditure was collected from the website of the General Directorate of Local Authorities (DGAL, 2024). Demographic

indicators relating to the total population were taken from Pordata databases (Pordata, 2024).

The budgetary variable (expenditure) analysed in this study was selected as it constitutes the most direct indicator for assessing mayoral opportunism (Miguel, 2020). The model by Rogoff (1990), Block (2001), and Katsimi and Sarantides (2012) suggests that elections shift public expenditure towards current expenditure at the expense of public investment, since capital investments are often long-term projects and their completion can be difficult to coordinate with elections. Rosenberg (1992) and Veiga and Veiga (2004), meanwhile, identified capital expenditure items, particularly investment items, as the most visible categories.

Thus, the budgetary variables analysed in this study were:

- Total Expenditure
 - Current Expenditure
 - Capital Expenditure
 - Investment Expenditure

It should be noted that, in accordance with the budgetary classifications of local government in Portugal,³ the categories are organised as follows. First, there is the Capital Expenditure (Group). This is the broadest category, encompassing all expenditure that results in an increase in non-financial assets or a reduction in financial liabilities. It includes 1. investments, that is, acquisition or construction of capital assets (e.g. buildings, roads, vehicles); 2. capital transfers, the funds provided to other entities (e.g. Parish Councils) to enable them to make investments; 3. financial liabilities, i.e. repayment of bank loans; and 4. other capital expenditure, that is, other transactions that affect net assets.

And there is the Investment Expenditure (Sub-group), which refers specifically to the direct acquisition of capital assets (fixed assets) by the Council itself. In the municipal budget, these expenses are detailed in the Multi-Annual Investment Plan (PPI), which identifies each specific project and action.

Thus, capital expenditure is broader in scope, and to provide further detail in this case, investment expenditure is also used.

If mayors adopt an opportunistic attitude in terms of public spending, as the election draws nearer, the more they will have to spend to signal competence to the electorate. Thus, the political variable is the election year. It is recognised that the municipalities belonging to CIMBSE have a disparate population distribution, so the population density over the period of analysis is incorporated into the study to eliminate as much statistical noise as possible, allowing the relationship between the variables to be determined with greater relevance (Miguel, 2020).

³ Sistema de Normalização Contabilística para as Administrações Públicas, Decreto-Lei n.º 192/2015, de 11 de setembro. Online: <https://tinyurl.com/bdh9dhma>

This study is restricted to local finances, and the following hypotheses have been formulated:

H1: Municipal expenditure increases in election years relative to non-election years.

Sub-hypotheses:

- H1a: Total expenditure increases in election years.
- H1b: Current expenditure increases in election years.
- H1c: Capital expenditure increases in election years.
- H1d: Investment expenditure increases in election years.

Per capita variables were also used to take into account scale effects and enhance the robustness of the empirical results.

In this study, expenditure was analysed in nominal terms, and no deflation procedure was applied. This option is justified not only by the lack of consistent and comparable price indices for NUTS III (Intermunicipal Community) for the period under review, but also by the low level of inflation observed, which was below 2% in most years and, in some cases, negative. In this context, it is considered that the impact of price changes on the values analysed is limited and does not significantly compromise the interpretation of the results. Furthermore, given that the focus of the study is primarily on the comparison between regions over a specific period, rather than on the temporal evolution in real terms, the use of nominal values is methodologically appropriate.

To verify whether there are significant differences between the budgetary variables in election and non-election years, a set of tests is carried out to identify whether mayors seek to signal competencies in the election year, such as an increase in some budgetary expenditure (Miguel, 2020).

Data were analysed using IBM SPSS Statistics (version 29) and Microsoft Excel.

In order to facilitate the comparison of expenditure figures over the period under study, based on both election and non-election years, parametric tests will be used, namely the t-test for two samples with two quantitative variables that follow a normal distribution.

4. Analysis and discussion of results

4.1. Analysing expenditure in absolute values

The simplest budget indicator is total expenditure. Total expenditure is the sum of current expenditure and capital expenditure. Current expenditure generally reflects expenditure on goods and services, salaries, subsidies and other current transfers, consumed in the current year to meet social and collective obligations and needs, and affects the non-durable assets of the municipality (CFP, 2024). Capital expenditure is all expenditure that alters the municipality's durable assets, produces goods or services, and involves the creation or increase of assets (Carvalho, 1996).

Table 2
Current, capital, total and investment expenditure in CIMBSE (in million euros)

Year	Expenditure in CIMBSE (in million euros)			
	Current	Capital	Total	Investment
2008	132.83	118.44	251.27	65.93
2009	142.60	121.10	263.70	56.80
2010	140.47	122.71	263.18	49.70
2011	149.18	122.25	271.44	68.45
2012	133.73	85.71	219.44	41.62
2013	153.54	124.31	277.84	66.35
2014	135.10	63.88	198.99	22.76
2015	146.00	69.45	215.46	22.74
2016	144.15	84.25	228.40	19.92
2017	148.99	98.39	247.39	22.01
2018	165.75	155.24	320.99	38.96
2019	172.74	81.98	254.73	30.80
2020	188.26	75.97	264.24	38.29
2021	203.38	92.79	296.17	38.55
2022	219.94	93.10	313.04	30.77
Total	2,376.69	1,509.59	3,886.27	613.65

Source: DGAL, 2024

Table 2 shows the values of current, capital, total, and investment expenditure over the period 2008 to 2022 in CIMBSE (DGAL, 2024). In this period, 61.16% of total expenditure was spent on current expenditure and 38.84% on capital expenditure. Investment expenditure represents 40.65% of capital expenditure and 15.79% of total expenditure.

Between 2008 and 2022, total expenditure increased by 24.58%, with current expenditure also increasing by 65.59% and, on the other hand, capital expenditure decreasing by 21.40%. Investment expenditure in this period fell significantly by 53.33%.

In 2008, current and capital expenditure were very close, and by 2022, current expenditure will represent 70% of capital expenditure.

Concerning the evolution of current and capital expenditure in the budgets of the municipalities belonging to CIMBSE over the 15 years analysed, it can be seen that in 2008, current and capital expenditure were very close, accounting for 53% and 47% respectively of total expenditure. However, 15 years on, the financial picture has changed considerably. In 2022, current expenditure represents 70% of total expenditure, and capital expenditure only 30% of total expenditure.

The results of the Shapiro-Wilk normality test (Table 3) indicate that, in the election years, total expenditure [$W(10) = 0.847, p = 0.053$] follows the normal distribution unlike current expenditure [$W(10) = 0.695, p = 0.001$], capital expenditure [$W(10) = 0.750, p = 0.004$] and investment expenditure [$W(10) = 0.837, p = 0.041$] which do not follow the normal distribution.

Table 3
Expenditure normality test (election year)

Expenditure (election year)	Shapiro-Wilk		
	Statistic	df	Sig.
Total	.847	10	.053
Current	.695	10	.001
Capital	.750	10	.004
Investment	0.837	10	0.041

Source: Compiled by the authors.

For Total Expenditure, the t-test for two paired samples (Table 4) indicates that there is statistical evidence that total expenditure in election years is higher than total expenditure in non-election years [$t(9) = 3.170$, $p\text{-value} = 0.011$]. This means that there is strong evidence of CPE in relation to total expenditure in the elections of the municipalities belonging to CIMBSE, so sub-hypothesis H1a is validated.

Table 4
Paired samples t-test for the variable total expenditure
and investment in election and non-election years

Paired differences								
Expenditure	Mean	Error deviation	Standard error of the mean	95% Difference confidence interval		t	df	Sig. (2 extremities)
				Lower	Upper			
Total – Election year								
Total – Non-election year	23.977	23.918	7.564	6.867	41.087	3.170	9	.011

Source: Compiled by the authors.

The Wilcoxon test in Table 5 shows that there is statistically significant evidence that current expenditure in election years is higher than current expenditure in non-election years ($Z = -2.803$, $p\text{-value} = 0.005$), so there is strong evidence of CPE in the elections of the municipalities belonging to CIMBSE (H1b is not rejected). On the other hand, there is no statistically significant evidence to say that capital expenditure in election years is higher than capital expenditure in non-election years ($Z = -1.784$, $p\text{-value} = 0.074$) (H1c is rejected), and there is also no statistical evidence to say that investment expenditure in election years is higher than in non-election years ($Z = -0.459$, $p\text{-value} = 0.646$) (H1d is rejected).

Table 5
*Wilcoxon two-sample paired test for current, capital
 and investment expenditure in non-election and election years*

	Test statistics ^a		
	Expenditure		
	Currents – Non-election year Current – Election year	Capital – Non-election year Capital – Election year	Investment – Non-election year Investment – Election year
Z	-2.803 ^b	-1.784 ^b	-.459 ^b
Significance Sig. (bilateral)	.005	.074	.646

Notes: a) Test of classifications signed by Wilcoxon; b) Based on positive posts.

Source: Compiled by the authors.

These results confirm the predictions of the Rogoff (1990) model, i.e. public spending in election years shifts towards current expenditure and away from capital expenditure. Contrary to what was reported by Rosenberg (1992) and also by Veiga and Veiga (2004), there is no electoral effect on capital expenditure.

The opportunistic behaviour seen in current expenditure was particularly prevalent in personnel expenditure (37%) and expenditure on the purchase of goods and services (43%) (Figure 1). It should be noted that of the expenditure on goods and services, 78% was spent on the purchase of services.

Investment expenditure represents the total amount spent on the acquisition of goods that contribute to the formation of fixed capital in a given year. It is a part of capital expenditure.

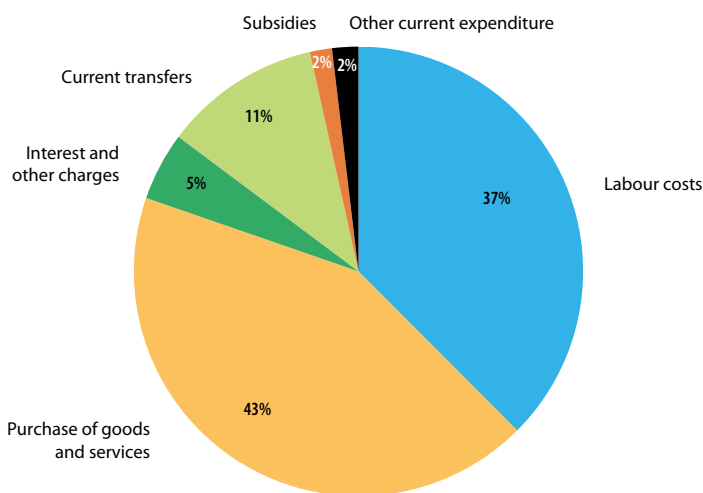


Figure 1
Current expenditure by groupings from 2008 to 2022

Source: DGAL, 2024

Table 6
Volume of investment expenditure for all municipalities

Year	Capital expenditure as a % of total expenditure	Investment as a % of total expenditure	Investment as a % of capital expenditure
2008	47.14%	26.24%	55.67%
2009	45.92%	21.54%	46.91%
2010	46.62%	18.88%	40.50%
2011	45.04%	25.22%	55.99%
2012	39.06%	18.97%	48.57%
2013	44.74%	23.88%	53.37%
2014	32.10%	11.44%	35.63%
2015	32.24%	10.55%	32.74%
2016	36.89%	872%	23.65%
2017	39.77%	8.90%	22.36%
2018	48.36%	12.14%	25.10%
2019	32.18%	12.09%	37.57%
2020	28.75%	14.49%	50.40%
2021	31.33%	13.02%	41.54%
2022	29.74%	9.83%	33.05%
Total	38.84%	15.79%	40.65%

Source: Compiled by the authors.

In the period under review, 38.84% of total expenditure was allocated to capital expenditure, with 40.65% of it going to investment. Although capital expenditure shows a percentage decrease in relation to total expenditure, the percentage of capital expenditure allocated to investment has varied over the years, representing 15.79% of total expenditure between 2008 and 2022. In 2008, investment expenditure accounted for 55.67% of capital expenditure, while in 2022 it accounted for only 33.05% (Table 6).

Per capita variables take into account scale effects and ensure comparability across units of different sizes. By adjusting for population, they capture average individual impacts rather than aggregate totals. This improves interpretability and strengthens the robustness of empirical results.

4.2. Analysing expenditure per capita

According to Miguel (2020), when data is weighted according to population, it is possible to obtain a more accurate representation of the distribution of resources. Therefore, expenditure will be weighted by population to obtain per capita expenditure (Table 7).

Between 2008 and 2022, the population of the municipalities that make up CIMBSE fell by 13.89%. Total expenditure per capita increased by 44.68%, with current expenditure per capita increasing by 92.29% and capital expenditure per capita decreasing by 8.72%. Investment expenditure per capita also fell by 45.81%.

Table 7
Current, capital, total and investment expenditure per capita in CIMBSE (in euros)

Year	Population	Expenditure per capita (in euros)			
		Current	Capital	Total	Investment
2008	243,216	546.12	486.99	1,033.11	271.09
2009	240,674	592.50	503.17	1,095.67	236.02
2010	238,026	590.16	515.52	1,105.69	208.80
2011	235,862	632.50	518.33	1,150.83	290.22
2012	233,394	572.98	367.22	940.20	178.34
2013	230,004	667.53	540.45	1,207.98	288.46
2014	226,732	595.87	281.75	877.62	100.39
2015	223,754	652.52	310.40	962.91	101.61
2016	220,891	652.60	381.41	1,034.01	90.19
2017	218,124	683.06	451.10	1,134.15	100.89
2018	215,573	768.88	720.15	1,489.03	180.73
2019	213,556	808.90	383.90	1,192.79	144.24
2020	212,301	886.78	357.85	1,244.63	180.36
2021	211,162	963.16	439.43	1,402.59	182.55
2022	209,438	1,050.16	444.52	1,494.68	146.91

Source: DGAL, 2024

Table 8 shows the results of the normality test for per capita expenditure in the election years.

Table 8
Per capita expenditure normality test (election year)

Per capita expenditure (election year)	Shapiro-Wilk		
	Statistic	df	Sig.
Total	0.804	10	0.016
Current	0.722	10	0.002
Capital	0.751	10	0.004
Investment	0.850	10	0.058

Source: Compiled by the authors.

Table 8 shows that the only variable that follows a normal distribution is investment expenditure per capita – election year ($p\text{-value} > 0.05$).

Table 9 shows that there is statistically significant evidence that total expenditure per capita ($Z = -2.497$, $p\text{-value} = 0.013$) and current expenditure per capita ($Z = -2.803$, $p\text{-value} = 0.005$) in election years are higher than in non-election years. In other words, the results suggest the existence of PEC in the election years of the municipalities belonging to CIMBSE in relation to this per capita expenditure. As for capital expenditure

per capita, there is no statistical evidence that this expenditure is influenced by the electoral calendar ($Z = -1.784$, $p\text{-value} = 0.074$).

Table 9
*Wilcoxon two-sample paired test for current, capital
and investment expenditure per capita in non-election and election years*

	Test statistics ^a		
	Expenditure per capita		
	Currents – Non-election year Current – Election year	Capital – Non-election year Capital – Election year	Investment – Non-election year Investment – Election year
Z	-2.803 ^b	-1.784 ^b	-2.497 ^b
Significance Sig. (bilateral)	0.005	0.074	0.013

Notes: a) Test of classifications signed by Wilcoxon; b) Based on positive posts.

Source: Compiled by the authors.

Table 10 shows that there is no statistically significant evidence that investment spending per capita in election years is higher than investment spending per capita in non-election years [$t(9) = 1.494$, $p\text{-value} = 0.169$]. In other words, there is no PEC in relation to investment spending.

Table 10
Paired samples t-test for investment expenditure per capita

Paired differences								
Investment expenditure per capita	Mean	Error deviation	Standard error of the mean	95% Difference confidence interval		t	df	Sig. (2 extremities)
				Lower	Upper			
Total – Election year Total – Non-election year	20.58	43.54	13.77	-10.57	51.72	1.494	9	.0169

Source: Compiled by the authors.

In short, the statistical tests indicate the existence of opportunistic cycles in the CIMBSE about total and current expenditure, both when calculated in absolute terms and per capita. It also indicates that this expenditure is manipulated by mayors in order to improve their electoral prospects, boosting their chances of re-election. On the other hand, the results do not confirm the existence of opportunistic cycles in capital and investment spending, either in absolute or per capita terms.

The literature presents different results regarding the expenditure components that are manipulated during elections. The model by Rogoff (1990), Block (2001), and Katsimi and Sarantides (2012) states that elections shift public spending towards current

expenditure to the detriment of public investment, unlike Rosenberg (1992) and Veiga and Veiga (2004; 2005), who identify capital expenditure items, in particular investment items, as the most visible items.

In sum, the robustness of the overall results is confirmed, as the per capita analysis yields consistent relationships in terms of direction and significance.

5. Conclusion

This study aimed to verify the existence of PEC in the 15 municipalities belonging to CIMBSE between 2008 and 2022. The budget variables analysed show that total expenditure and current expenditure were the most manipulated in election years in the municipalities belonging to the region. The results obtained are generally in line with previous research into the phenomenon, which has observed an opportunistic tendency on the part of mayors.

In line with the opportunistic cycles mentioned by Rogoff (1990), the mayors of the municipalities belonging to CIMBSE manage public spending in such a way as to show greater competence in election years. Thus, to appear competent, they resort to more visible current expenditure rather than public investment.

However, we must point out certain limitations. First, the relative scarcity of studies on the subject at the local government level in Portugal. And second, we have also identified some limitations in the data collected, which did not provide a sufficiently detailed breakdown to allow a full understanding of the types of expenditure made. The failure to account for inflation when deflating expenditure figures, due to the lack of deflators at the Intermunicipal Community level, also constitutes a limitation, which could be overcome in other studies covering NUTS II regions, or by using proxies or regional adjustments.

With these limitations in mind, it would be an interesting avenue for future research to rethink the econometric strategy by employing panel data regression techniques, and it will be interesting to compare the relationship between mayors' political ideology and opportunistic expenditure management.

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From Unambiguity to Widescreen: Broadening the Evaluation Criteria of Effectiveness, Efficiency and Compliance in the Public Sector

A Dutch Municipal Case Study

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Abstract: Evaluation of government organisations in terms of effectiveness, efficiency and compliance is increasingly being mandated in European countries. However, the actual evaluation of government organisations based on these three criteria can be particularly complex in practice. In this contribution, using a municipal case study as an example, the evaluation criteria of effectiveness, efficiency and compliance are situated within political, economic and legal rationalities, respectively. This approach yields a broader and more nuanced understanding of the extent to which a public sector organisation operates effectively, efficiently, or in accordance with the law. On the other hand, positioning the criteria within these three rationalities implies that it is not straightforward to construct a predetermined normative framework, and that in most cases no unequivocal assessment can be reached. The rationalities do not contradict one another: each employs a distinct criterium, and together they complement each other and provide a more comprehensive basis for evaluation.

Keywords: evaluation, effectiveness, efficiency, compliance, rationality

1. Introduction

The evaluation of policy and its implementation can foster accountability, organisational learning, and even inter-organisational collaboration in the public sector (Van Der Meer & Edelenbos, 2006; Lemire et al., 2020; van der Knaap et al., 2023). Evaluation of government organisations in terms of effectiveness, efficiency and compliance is increasingly being mandated in European countries (Bovens, 2007; Stern, 2009). Likewise, in the Netherlands, legislation prescribes that government organisations must be evaluated on the basis of these three criteria. For instance, ministers are held accountable for the efficiency and compliance of financial management and are responsible for the periodic assessment of the efficiency and effectiveness of policy and operational management. At the decentralised level, the ordinance on financial policy and management must ensure compliance, and the board is required to periodically evaluate the efficiency and effectiveness of implemented policy. These three criteria also constitute the guiding principles for audits conducted by Dutch audit offices at both central and decentralised levels.

The practical application of these criteria within public sector organisations is not always without challenges. To trace the degree of effectiveness, the objectives of the public organisation are often taken as the starting point (van Twist & Verheul, 2010; Brown, 2021; Virtanen & Jalonen, 2024). However, consensus regarding these objectives is not always present (Teisman, 1992; Moore, 1995; Bulgarelli & Gori, 2004; Arensman & van Wessel, 2018; Rothgang & Lageman, 2021). Gaining insight into efficiency further requires understanding the output produced by the organisation, yet such output is not always readily identifiable (Farrell, 1957; White, 1999; Klaassen et al., 2010; Rutgers & van der Meer, 2010). Furthermore, the degree of compliance appears to be associated with various, and at times conflicting, legal provisions, while the application of particular legal provisions to individual cases may leave room for divergent interpretations (Matland, 1995; Blay & Piotrowicz, 2001; Stevens, 2007; Schotman, 2017; Michelin, 2018; Rogers, 2018; Manca, 2022).

These challenges are partly rooted in an approach that presumes effectiveness, efficiency and compliance as having unambiguous conceptualisations, allowing for standardised norms and unambiguous evaluation. In practice, however, there is not always a clear picture of the constituent elements underlying these concepts (White, 1999; Workman, 2015).

It can be argued that effectiveness, efficiency and compliance can be situated within three distinct rationalities: political, economic and legal rationality, respectively. By embedding these criteria within their respective rationalities, it may become possible to conceptualise them more broadly and thereby address some of the practical complications commonly encountered.

While previous research has analysed the functioning of public administration from the perspective of different rationalities, this approach has not yet been explicitly applied in the evaluation of public organisations in terms of effectiveness, efficiency and compliance (Snellen, 2002; in 't Veld & Kruiter, 2012; Langer, 2022). Positioning these three criteria within separate rationalities, however, generates additional insights into their

various manifestations, thereby enriching the evaluation process (Bovaird & Löffler, 2003; Van Der Meer & Edelenbos, 2006).

This contribution provides a foundation for a further elaboration of the evaluation criteria effectiveness, efficiency and compliance. To this end, these three criteria will be situated within, respectively, a political, an economic, and a legal rationality. This approach generates a broader and more nuanced understanding of the extent to which a public sector organisation operates effectively, efficiently, or in a compliant manner (Schreurs, 2002; in 't Veld & Kruiter, 2012). These different rationalities can complement each other and, combined, provide a framework for evaluating the actions of public sector organisations (Hanberger, 2001). At the same time, situating a criterion within a particular rationality implies that the evaluation will generally not result in an unambiguous judgment (Arensman & van Wessel, 2018; Lemire et al., 2020).

First, this contribution will address the meaning of the concept of rationality. The criteria effectiveness, efficiency and compliance will then be linked to three different rationalities. This broadens the criteria, and the implications for evaluation will be illustrated through a case study. Since one rationality alone is too comprehensive to serve as a basis for an evaluation framework, and the concretisation of a rationality is partly determined by the nature of a specific case, no normative framework will be developed initially. Instead, a single case of a Dutch municipality will be presented to representatives of the three rationalities, and the case will be evaluated based on the analysis provided by these respondents.

2. Theoretical exploration

2.1. The concept of rationality

Rationalities relate to standards, a certain 'format' or 'pattern' of reasoning and acting, and are grounded in knowledge, values and choices (in 't Veld & Kruiter, 2012). A rationality can be understood as a particular way of approaching problems and developing solutions (West, 1983; Meier et al., 2019; Langer, 2022). Within each rationality, different values are prioritised distinctly relative to one another, and the functioning of public administration is approached and assessed from a unique perspective. Each rationality is therefore associated with a specific complex of norms and a particular language (Snellen, 2002; Jones, 2002; 2017).

Rationality is sometimes interpreted instrumentally and then typically refers to economic rationality (Schreurs, 2002). However, within public administration, besides economic values, other values are also relevant, such as legitimacy, democratic quality, equality before the law and reliability (Long, 1954; Hood, 1991; White, 1999; Schreurs, 2002; Bovaird & Löffler, 2003; Meier et al., 2019). Hence, in addition to economic rationality, one can distinguish legal-procedural, political and technical rationalities (Snellen, 2002; in 't Veld & Kruiter, 2012). Other categorisations are possible, and it is conceivable that new rationalities may emerge as well (Hartwig, 1978; Snellen, 2002).

There is no single dominant rationality for approaching problems in public administration (Hartwig, 1978; Jones, 2017). In general, it is assumed that each rationality

is indispensable for the proper functioning of public administration (Snellen, 2002, p. 327; Bovens, 2007).

However, combining multiple rationalities into a single course of action is far from straightforward, as each rationality operates according to a distinct normative framework. At times, the normative framework of one rationality may exclude solutions proposed by another rationality (Overkleeft-Verburg, 1998). Moreover, rationalities tend to dominate one another; representatives of different rationalities often pursue the maximisation of their own normative framework (Snellen, 2002; Benz, 2005). Representatives of a given rationality may also possess a trained incapacity to comprehend alternative rationalities. In bureaucratic organisations, where different rationalities are compartmentalised within separate departments and directorates, the development of genuine synergy between rationalities is impeded (West, 1988). Some authors go so far as to argue that rationalities are a primary reason why collaboration can break down, as they may obstruct trust, empathy, and thus understanding of others' underlying motivations (in 't Veld & Kruijer, 2012).

Effectiveness, efficiency and compliance each have distinct origins and can also be situated historically in different contexts of the public sector. When the organisation and steering of government organisations are viewed within a developmental trajectory from traditional public management, via new public management, to public value management, the emphasis placed on these criteria shifts (Pollitt & Bouckaert, 2000; Bovaird & Löffler, 2003; Nabatchi, 2009; Moore, 2014; Brown, 2021). Whereas traditional public management emphasises compliant conduct, new public management centres on the business–economic concept of efficiency. Public value management, by contrast, focuses explicitly on the achievement of societal objectives in terms of public values, thereby placing the emphasis on effectiveness (Moore, 1995; O'Toole, 1997; Rhodes, 1997; Pierre, 2000; Stoker, 2006; Rethemeyer & Hatmaker, 2007; Vrangbæk, 2009; Hovik & Hanssen, 2015; Ansell et al., 2017; Howlett & Ramesh, 2016).

2.2. Placing the criteria within three rationalities

The criteria of effectiveness, efficiency and compliance differ not only in their historical context, but also in the underlying rationality on which they are based. In order to fully understand these criteria, they must be examined in the light of their respective rationalities (Overkleeft-Verburg, 1998; Workman, 2015). In this regard, effectiveness can be situated within the political rationality, efficiency within the economic rationality, and compliance within the legal rationality.

The Dutch Regulation on Periodic Evaluation Research defines effectiveness as the extent to which policy objectives are achieved as a result of the implemented policy, and with as few undesirable side effects as possible (Article 1.1, Regulation on Periodic Evaluation Research 2022; Algemene Rekenkamer, 2023). In this conceptualisation, effectiveness pertains to the attainment of intended objectives as a consequence of implemented policy (Haselbekke et al., 1990; Hoogerwerf, 1995; ter Bogt & van Helden, 2005; Klaassen et al., 2010; van Twist & Verheul, 2010; Peters et al., 2018; Mukherjee et al., 2021; van der Knaap et al., 2023). One of the major complications in applying this

conceptualisation of effectiveness lies in the fact that there is not always consensus on the objectives to be achieved, nor on the desirable societal outcomes to be pursued (Bulgarelli & Gori, 2004; Klaassen et al., 2010; Arensman & van Wessel, 2018).

When the concept of effectiveness is situated within the political rationality, a broader perspective on this concept emerges. Politics concerns itself with the making of authorised, binding and collective decisions (Jones, 2002; Askim & Christensen, 2025). Political rationality prescribes that certain collective problems should be placed on the agenda and be provided with possible solutions in order to achieve desirable societal outcomes and deliver public value (Moore, 1995; Pierre, 2000; Snellen, 2002; Stoker, 2006). Within the political rationality, it is acknowledged that there is not always consensus on the desirable societal outcomes or the public values to be pursued (Bovaird & Löffler, 2003; Howlett, 2015; Mukherjee et al., 2021). Plurality of values is, in this context, an essential characteristic of public administration (Hoogerwerf, 1995; Moore, 1995; Jørgensen & Bozeman, 2007). When placed within the political rationality, the concept of effectiveness therefore acquires a more individualised character: from the perspective of one actor, an organisation may be acting effectively, while from the perspective of another actor, this may not necessarily be the case (Conn et al., 1973; Bovaird & Löffler, 2003; Kuruvilla & Dorstewitz, 2010; Brown, 2021). Whereas the original conceptualisation of effectiveness assumes an organisation-wide normative consensus and a uniform assessment, within the political rationality, the concept acquires an actor-specific dimension, and the assessment of effectiveness must be considered in light of the interests and objectives of a particular actor (Anderson, 2006; Virtanen & Jalonen, 2024).

To explain the realisation of public values and the degree of effectiveness, the political rationality allows for the mobilisation of a wide range of factors and perspectives (Dunleavy, 1991; Jørgensen & Bozeman, 2007; Fimreite & Læg Reid, 2009; Janssens & de Wolf, 2009). For example, the process of value creation can be analysed through the lens of interaction with other actors, the influence an actor wields, the configuration of power relations, the decision-making processes, the way different objectives are weighed and conflicting interests are managed, the extent to which support and trust are generated, and so forth (Conn et al., 1973; West, 1988; Snellen, 2002; Jones, 2017; Egeberg & Trondal, 2018; Meier et al., 2019).

At the Dutch national level, efficiency is defined as the extent to which the outputs and impacts of policy are achieved with the lowest possible use of (financial) resources and minimal undesirable side effects, or, conversely, the extent to which, with a given amount of (financial) resources, the maximum policy outputs and impacts are achieved while minimising undesirable side effects (Article 1.1, Regulation on Periodic Evaluation Research 2022). From a business-economic perspective, efficiency can be defined as the ratio between realised and desired productivity, whereby productivity refers to an output–input relationship (Farrell, 1957; Haselbekke et al., 1990; ter Bogt & van Helden, 1994; Hoogerwerf, 1995; White, 1999; Nabatchi, 2009). Whereas effectiveness generally concerns the achievement of objectives, efficiency often focuses on the manner in which those objectives are achieved (Klaassen et al., 2010; Kuruvilla & Dorstewitz, 2010). As such, efficiency acquires an instrumental character (Dasgupta, 1990; Lee, 2019). In most approaches to efficiency, the delivered output is taken as the starting point. Here, one of the major challenges within

public sector organisations becomes apparent: in government contexts, output is by no means always readily identifiable (Anderson, 2006; Klaassen et al., 2010).

The phenomenon of scarcity constitutes a core element of the economic rationality (Snellen, 2002). Within the economic rationality, it is acknowledged that the desired output to be delivered cannot always be clearly identified (Rutgers & van der Meer, 2010). Consequently, efficiency is conceived more broadly than merely the attainment of desired productivity (Lee, 2019). The prevention of counter-productivity can also serve as an indicator of efficiency, and within the economic rationality, the concept of efficiency thereby expands towards process optimisation and process control (Farrell, 1957; Conn et al., 1973; Kuruvilla & Dorstewitz, 2010).

This broadening of the concept of efficiency gives rise to a correspondingly wide range of considerations and explanatory factors for the level of efficiency achieved (Dasgupta, 1990; Hong, 2019). From the perspective of the economic rationality, attention may be directed towards the design of risk management or internal control mechanisms, the methods by which cost prices and budgets are calculated, allocated and monitored, the extent to which processes are controlled and optimised, and the functioning of the planning and control system, among other factors (ter Bogt & van Helden, 1994; ter Bogt, 2003; Anthony & Young, 2004; Merchant & Otley, 2006; Widener, 2007; Klaassen et al., 2010). Since, within the economic rationality, efficiency is extended to encompass process control, process management becomes a specific area of focus. In this approach to efficiency, consideration is also given to how output steering, performance management, or output budgeting can be designed and implemented (Otley, 1999; ter Bogt & van Helden, 2005; Rajan & Reichelstein, 2006).

The Dutch Government interprets the concept of compliance in the accounting sense, designating a financial transaction as compliant if it is in accordance with the provisions set out in budget laws, among others (Ministry of Finance, 2025). A broader definition is offered by the BADO Committee: "In principle, the legal concept of compliance relates to all applicable laws and regulations. Compliance is acting in accordance with these laws and regulations" (BADO, 2020, p. 14). In the legal literature, compliance is understood as the extent to which actions, decisions, or situations comply with applicable law (van Ommeren, 1988; Schotman, 2017; Rogers, 2018; Coşpănar, 2019; Polak et al., 2019; Barkhuysen et al., 2022; Perlman et al., 2023). Given that public sector organisations are generally subject to a multitude of provisions, the question arises as to whether it is possible for an organisation to comply with all prevailing provisions, particularly when such provisions may be in tension with one another (Blay & Piotrowicz, 2001). Furthermore, the question emerges as to the extent to which evaluating governmental action on the basis of a single provision allows for multiple interpretations (Stevens, 2007; Schotman, 2017; Michelon, 2018; Manea, 2022).

Legal rationality focuses on all the elements necessary to safeguard our trust in the law (van Ommeren, 1988; Stevens, 2007; Schotman, 2017). Situated within the framework of legal rationality, the concept of compliance manifests itself in a wide variety of forms, depending on the specific governmental action in question and the particular provisions subject to evaluation (Bovaird & Löffler, 2003). One and the same legal act may be assessed differently in terms of compliance, depending on the specific provision or

principle included in the analysis. For instance, compliance may be evaluated in relation to special public law provisions, but it can also be assessed on the basis of the general principles of proper administration (Blay & Piotrowicz, 2001; Schlössels, 2021; Barkhuysen et al., 2022). This typically does not lead to a single, unequivocal judgment.

Furthermore, provisions must be interpreted in the course of their application to an individual case. No matter how strictly a provision is drafted, its application invariably involves a certain degree of interpretative discretion (Stevens, 2007; Michelon, 2018). It is therefore entirely conceivable that, based on one and the same provision, a given course of action may be deemed compliant by some, yet less compliant by others (Coșpănar, 2019; Perlman et al., 2023). Within the paradigm of legal rationality, even the provisions themselves may be subject to critical reflection: provisions that are poorly aligned with the general principles of good administration may, through an exceptive review or the application of the principle of proportionality, be declared unlawful (Hoge Raad, 1978; Bröring & de Graaf, 2016; Rogers, 2018; Barkhuysen et al., 2022).

Here too, situating the concept of compliance within the framework of legal rationality yields a multiplicity of focal points and explanatory perspectives. Within legal rationality, the legal act itself can be designated as the object of analysis, allowing one to examine the extent to which this legal act aligns with specific provisions or general principles of proper administration (Westerman, 2006; van Erp & Mascini, 2011; Bokhorst & de Goede, 2014). Within this rationality, relatively considerable attention is also devoted to the various ways in which a provision may be interpreted and applied to an individual case in order to assess its compliance. This involves, among other things, examining whether the provisions are formulated with a focus on substantive objectives or rather on procedural requirements; whether they employ closed norms or open standards; the degree of discretionary power afforded to the administrative body; and the extent to which the provisions themselves align with the general principles of good administration (Meussen, 2002; Colon & Swagerman, 2015).

The above can be summarised as shown in Table 1.

Table 1
Rationality and criteria

	Effectiveness	Efficiency	Compliance
Criterion as defined in Dutch legal provisions	The extent to which the intended societal objectives are achieved as a result of government action	The extent to which the greatest possible output is achieved with the least possible means	The extent to which actions are in accordance with all applicable provisions
Criterion placed within a rationality	The extent to which an actor's intended objectives are achieved	The extent to which processes are effectively controlled	The extent to which government action is in accordance with pre-specified provisions and principles, while allowing for a certain degree of interpretative discretion in the application of those provisions

Source: Compiled by the author.

3. Case study design

The theoretical exploration demonstrates that, once criteria are situated within a specific rationality, numerous approaches can be applied, explanatory factors can be advanced, and distinct normative frameworks can be employed. Moreover, the conceptualisation of any given criterion is shaped by the specific characteristics of the case at hand. Consequently, it is not possible to construct an *a priori* normative framework, based solely on the three rationalities, to evaluate the actions of a public organisation in terms of effectiveness, efficiency and compliance. Therefore, an alternative approach was adopted. The same municipal case was presented to presumed representatives of the political, economic and legal rationalities.

The case concerns a municipal collaboration with Company 'B', a private company providing complementary support services within the social domain. In 2022, the municipality decided to contract these services from a single provider, Company 'B'. Based on a document analysis and 21 interviews with council members, board members, civil servants and employees of Company 'B', a case description was developed.¹ The document analysis drew upon council and municipal board proposals, program budgets and annual reports, internal reports, reports by Company 'B', contracts, assignments, and other official communications between the municipality and Company 'B', as well as public information releases, minutes of council and committee meetings, and minutes of the General Shareholders' Meeting.

The interviews aimed to obtain a clearer picture of the decision-making process and the relationships among the council, the municipal board and the General Shareholders' Meeting, and to clarify ambiguities found in the documents. The case description addresses the municipality's rationale for consolidating services under a single provider, the selection process, contracting and implementation, financial management and operations, municipal steering and planning and control functions, decision-making within the council, municipal board and shareholders' meeting, and the role of the municipal council.

Subsequently, the case description was presented to representatives of the three rationalities, with the request to analyse and evaluate the case. The three groups of respondents were asked to assess the case in terms of effectiveness (the group representing the political rationality), efficiency (the group representing the economic rationality), or compliance (the group representing the legal rationality). No specific normative framework for analysis or evaluation was provided intentionally. Likewise, the object of analysis and evaluation was left unspecified. Respondents were free to select their own focus, such as the selection process, municipal steering, administrative decision-making, operational management, the planning and control function, or any combination of these aspects.

By deliberately granting respondents the freedom to select and operationalise their own norms and to choose the object of analysis and evaluation, it becomes possible to gain

¹ The respondents have declared in writing, in advance, that they are participating in this study entirely voluntarily and without any personal interest. It has also been guaranteed that all findings will be analysed anonymously.

insight into how the criteria are applied in practice and how they may be broadened within a given rationality.

To select the representatives, fifteen municipalities of comparable size were contacted. Respondents from fourteen of these municipalities agreed to reflect on the case. The case was thus presented to eight aldermen and nine policy advisors working in the field of municipal politics and administration (representatives of the political rationality). In addition, thirteen economists employed within municipal finance departments or serving as financial controllers participated as representatives of the economic rationality. Finally, twelve legal advisors working in municipal legal departments participated as representatives of the legal rationality.

Each respondent analysed and evaluated the case individually and submitted a written analysis. The various analyses within each rationality group were then synthesised into three comprehensive analyses. All substantive notions provided by the respondents were included, while duplicate notions with identical meanings across different responses were consolidated. In this manner, three distinct overall analyses were produced: an analysis of effectiveness based on the input of the representatives of the political rationality; an analysis of efficiency derived from the representatives of the economic rationality; and an analysis of compliance based on the input from the representatives of the legal rationality. The same procedure was applied to the evaluations, resulting in three comprehensive evaluations corresponding to the three rationalities. The three overarching analyses can be presented as follows.

3.1. Political analysis

The representatives of the political rationality (namely, the aldermen and political advisors) analysed the case as follows.

The Alderman for the Social Domain (Alderman A) of the municipality sought to simplify the procurement of services within the social domain. Specifically, this concerned ambulant care, day care, family support, personal budgets and social shelter services. In the previous arrangement, these services were procured from 143 different providers, involving seven separate departmental units of the municipality. In consultation with the municipal board of mayor and aldermen and the executive board, the plan was conceived to procure all of these services from a single provider: Company 'B'. Simultaneously, the internal organisation of the social domain of the municipality would need to be restructured, establishing centralised coordination and management within the municipal administration and transferring the municipal social district teams to the contractor. This reorganisation would provide Alderman A with greater capacity for consistent political and administrative steering.

When the plan was first presented to the Social Affairs Committee in mid-2021, it received a critical response. Committee members questioned whether the proposed approach would generate genuine cost savings and expressed concerns about the municipality becoming overly dependent on a single provider. They also voiced apprehension regarding the continuity of service provision during the transition of social

district teams to the contractor. It was decided to revisit the item in a subsequent committee meeting.

In the lead-up to that second meeting, a substantial number of written questions were submitted by municipal councillors. In his responses, Alderman A outlined the goals and benefits of the new approach. These answers did not fully convince the committee, which resolved to include the proposal as a discussion item on the agenda of the November 2021 council meeting. Prior to this meeting, the alderman conducted several bilateral consultations with party leaders of the municipal council. During these consultations, the party leaders stressed the priority of ensuring continuity in service provision. In the November 2021 council meeting, the alderman emphasised this point in his address, thereby securing sufficient support from the council to approve the proposal.

The Alderman for Finance (Alderman B) endorsed the plan on the condition that it could be implemented on a budget-neutral basis. To ensure that service delivery would not only meet quality standards but also remain within the municipality's budget boundaries, the municipal board decided to acquire a participatory stake in Company 'B'. As part of this arrangement, the municipality required that Alderman A serve as a member of the supervisory board and Alderman B act as a shareholder in the General Shareholders' Meeting (GSM) of Company 'B'. The contract was awarded in mid-2022, enabling Company 'B' to commence organisational preparations.

Operations began in 2023. Shortly thereafter, the municipal board received early indications that expenditures were likely to exceed the allocated budget. Several factors contributed to this expectation: the newly negotiated collective labour agreement was more costly than anticipated; demand for care services proved higher than projected; and the organisational transition required substantially more effort and resources than initially estimated. These developments prompted a debate within the board, in which Aldermen A and B found themselves at odds. Ultimately, the decision was taken to maintain the municipality's existing budgetary ceiling.

Throughout 2023, municipal councillors regularly approached Alderman A with requests to expand certain aspects of service provision, particularly in the fields of youth mental health, dementia care and debt counselling. Alderman A found himself in a difficult position: on the one hand, he was obliged to adhere to the municipality's budgetary framework; on the other, he needed to maintain political support within the council. In response, he chose to accommodate these requests, issuing a total of five supplementary assignment letters to Company 'B' during 2023, sometimes directly and sometimes via sectoral departments situated outside the central coordination structure of the municipality.

This approach ultimately resulted in a deficit of €5.1 million. The shortfall was first addressed in the GSM, which Alderman A attended in his capacity as supervisory board member. It was argued that the deficit was largely attributable to exogenous factors. Given that, at the request of its shareholders, the company operated with only a very modest equity position, both the company's management and supervisory board proposed that the municipality be asked to issue a declaration of indemnity and provide additional funds to cover the shortfall. The shareholders approved this proposal, with the exception of Alderman B, who insisted on the development of a cost-reduction plan.

At the initiative of Alderman A, the company regularly organised on-site information sessions for municipal councillors. These sessions were well attended, and the minutes indicate that, over the course of 2023, councillors developed an increasingly favourable attitude towards the collaboration.

The request for a declaration of indemnity was subsequently placed on the agenda of the municipal board. In the run-up to this meeting, Alderman A engaged in bilateral consultations with all aldermen, except for Alderman B. The party leaders of the municipal council affiliated with these aldermen were also invited to these discussions. During these meetings, emphasis was placed on the fact that the company had delivered additional services, which had ultimately contributed to the budget shortfall.

The municipal board eventually approved the request, again with the exception of Alderman B, and granted the Company ‘B’ both a declaration of indemnity and supplementary funding of €5.1 million. Alderman A subsequently presented and explained this decision to the Social Affairs Committee, which elicited neither questions nor debate.

3.2. Economic analysis

Respondents from an economic rationality perspective primarily focus on the desired output–input ratio, as this constitutes the principal benchmark for assessing the degree of efficiency achieved. In this case, the desired output–input ratio refers to the allocated budget in relation to the performance requirements set forth in the contract.

A closer examination of the municipality’s substantiation for the lump sum budget yields the following observations. In the invitation to tender, the lump sum budget is specified as follows.

Table 2
Original lump sum budget 2023

Social district teams	€4,000,000
Social infrastructure	€13,500,000
Outpatient support	€7,500,000
Day care	€2,500,000
Family support and guidance for young adults	€3,000,000
Personal care budget scheme	€2,500,000
Budget reduction target	€–1,000,000
Total budget 2023	€32,000,000

Source: Compiled by the author.

The municipality uses its own operational expenditures from previous years as the basis for budget determination. It is not uncommon for historical data to inform the desired output–input ratio. However, the drawback of such a historical basis is that any prior

budget maximisation practices are not corrected when calculating the lump sum budget for 2023. In many cases, such drawbacks are mitigated by including the provider’s proposed pricing as an award criterion. In this instance, however, pricing is not included as a separate award criterion in the invitation to tender.

Furthermore, the municipality has not conducted a benchmark analysis against other providers or municipalities. It also remains unclear how many activities, precisely, are to be performed within each budget category, as no substantiated price × quantity calculation has been employed. Based on the 2023 annual financial statements of the contractor, it is not possible to determine the exact volume of activities performed or the expenditure per activity.

Consequently, for each budget category, it is impossible to indicate exactly what has been delivered or whether the contractor spent more or less than estimated. Moreover, the estimates themselves lack substantiation. This means that the municipality has no real insight into the efficiency that has actually been achieved.

Respondents’ attention is now directed towards the extent to which the municipality exercises control over its processes. The first point to note is that, over time, the original budget has been increased.

Table 3
Budget developments from 2023 onwards

Contract letter and budget 2023	€32,000,000	€37,100,000 realised 2023 expenditure
Additional contract letters 2023	€3,000,000	
Contract letter and budget 2024	€35,902,210	n. a.
Contract letter and budget 2025	€40,396,525	n. a.

Source: Compiled by the author.

The budget increase in 2023 can be explained in part by the issuance of additional contract letters during the year, for which no corresponding financial coverage was secured. These additional activities relate to youth mental health, dementia care and debt relief. This raises questions about the extent to which the approved lump sum budget serves as a binding framework and whether budgetary oversight can be maintained under such circumstances. The budget increases for 2024 and 2025 are partly the result of incorporating the 2023 additional activities into the subsequent contractual scope. This raises the question of how the additional activities have been adequately budgeted.

According to interview records, some form of budget monitoring did take place during 2023. Municipal staff indicated that the budget overrun of €5.1 million did not come as a surprise. However, it remains unclear what corrective actions, if any, the municipality undertook in 2023 to address the overrun. It is clear, however, that the final actual expenditure exceeded the total value of the contract letters by €2.1 million. One would expect the municipality to have taken action to address at least this excess. It is also notable that no subsequent funding coverage was sought for the unfunded additional contract letters.

The municipality states that both the municipality and the contractor are jointly responsible for timely implementing appropriate control measures to mitigate risks. The agreement notes that risks are categorised based on their degree of predictability and controllability. However, this form of categorisation is not free from ambiguity. The question arises as to when risks are considered controllable and predictable. Both in academic literature and in practice, this question is answered very differently. Moreover, the risk management approach used does not clarify in advance which risks are borne by the municipality and which are borne by Company ‘B’. The allocation of responsibilities regarding risk management is a fundamental principle of effective risk management, as illustrated in the widely accepted Three Lines Model.

The 2023 annual report of Company ‘B’ mentions the assignment and identifies risks related to wage increases and housing. However, it does not specify how these risks will be managed or who holds primary responsibility. The 2024 annual report of Company ‘B’ shows some risk allocation: identified risks related to collective labour agreements, tariff indexation, and labour market tightness are quantified and divided between the contractor (in the form of cost-saving targets) and the municipality (in the form of additional budget). Notably, the risks borne by the municipality are not mentioned in the municipality’s risk section, as included in the council proposals.

The risk inventory is solely conducted by the contractor, with no further reflection or evaluation by the municipality. This raises questions regarding the comprehensiveness of the risk inventory. The risks identified are exclusively those that could negatively impact the contractor’s operations. Risks that affect only the municipality are not incorporated into the inventory. One such risk for the municipality is its dependency on a single party. A pertinent question is how Company ‘B’ leverages the market power it holds as an organisation. Company ‘B’ determines which subcontractor performs which activity within the municipality, potentially influenced by other interests.

Furthermore, it is notable that the equity of Company ‘B’ has significantly increased in recent years.

Table 4
Development of equity capital of Company ‘B’

Year	Equity capital
2021	€1,200,000
2022	€1,600,000
2023	€3,500,000
2024	€4,800,000 (projected)
2025	n.a.

Source: Compiled by the author.

A dilemma arises in this context. On the one hand, as a financial participant, the municipality has an interest in an adequate solvency position of Company ‘B’, and thus in a certain growth of its equity capital. On the other hand, the growth of equity capital may indicate that allocated budgets are not being utilised and are instead added to

Company 'B's general reserves. From the municipality's perspective, the latter is undesirable and could even create the impression of budget maximisation in advance.

It remains remarkable that Company 'B's equity capital has increased while the assignment shows a deficit of €5.1 million for 2023. Although municipal staff assert that this partnership is based on transparency and trust, and that the equity growth stems from activities outside the contract, the principal-agent dilemma is not fully resolved. Company 'B' has an incentive to maximise its equity capital, and there is a risk that costs are internally allocated via Company 'B's cost allocation statement to the municipality's assigned tasks, thereby fully exhausting the municipal budget while generating a positive balance from other activities. However, the municipality lacks insight into how internal cost allocations are made within Company 'B'. Since no cost price calculation per activity has been developed by the municipality, it cannot independently produce an operating overview per activity based on delivered performance.

A more detailed analysis can be conducted for the Social District Teams component.

Table 5
Process data for social district teams

Indicator	2022	2023
Cases already in process	412	1,239
Residents: Inflow	3,615	2,582
Residents: Outflow	2,788	1,873
Residents: Still in process	1,239	1,948
Waiting time (weeks)	5	7
Average care duration (months)	5	6
Costs (€)	3,275,000	4,000,000
Cost per outflow (€)	1,175	2,136
Cost per case (€)	961	1,405

Source: Compiled by the author.

From the process data overview, it can be inferred that in 2023, the cost per case increases, as well as the average treatment time and the waiting time.

3.3. Legal analysis

The respondents who can be regarded as representatives of legal rationality, i.e. the legal advisors, analyse the case as follows.

The municipality drafts a pre-selection document, a selection document and ultimately an invitation to tender. The question arises as to what extent the municipality should have tendered this contract according to the European public procurement procedure.

Article 2.24a of the Dutch Public Procurement Act 2012 provides an exemption possibility for this procedure. A public contract awarded by a contracting authority to a private legal entity falls outside the scope of the European procurement rules if three

conditions are cumulatively met. First, the municipality must exercise control over the legal entity similar to the supervision which it exercises over its own departments. Second, more than 80% of the activities of the private legal entity must consist of performing the municipality's assignments. Finally, there must be no direct participation of private capital in the controlled legal entity, except in cases where such private capital does not exert decisive influence over the entity (Article 12, Directive 2014/24/EU; Article 2.24a, Procurement Act 2012). The case description suggests that the municipality is invoking this exemption.

Examination of the 2023 annual accounts of Company 'B' shows a total turnover of €70 million, with the current contract amounting to €37.1 million: approximately 50% of the total turnover. As the municipality has not put forward any alternative measure, the contract fails to meet the activity criterion and therefore does not qualify for the exemption under Article 2.24a of the Procurement Act.

Furthermore, the municipality's supervision of the company is not structured in the same manner as over its own departments. According to settled case law, the municipality must be able to exercise decisive influence over both the company's strategic objectives and its significant decisions in order to meet the control criterion (Explanatory Memorandum, Procurement Act 2012; Case C-107/98). Mere representation on the supervisory board or the general meeting of shareholders is insufficient (Case C-383/21). Supervision of only part of the company's activities likewise does not satisfy the requirement; control must extend to the entire organisation and all of its activities (Case C-458/03). It can therefore be concluded that the municipality does not meet this control requirement. In particular, with regard to the company's other activities, no decisive influence by the municipality can be established.

Some respondents argue, in this regard, that certain activities within the contract are so self-contained that the question arises whether there are objective grounds for dividing the contract pursuant to Article 3 of the Directive, having regard to Article 2.14 of the Dutch Public Procurement Act. For these components, a European public procurement procedure might therefore not be applicable. Indeed, Article 1.5 of the Procurement Act prescribes that contracts must not be combined unnecessarily.

During the course of the cooperation, the municipality carries out a number of private law legal acts. For example, the conclusion of the agreement constitutes a multilateral private law legal act. Likewise, the issuance of assignment letters, in which the lump sum budget and various additional budgets are determined, may be regarded as a multilateral private law legal act. Finally, the financial participation in Company 'B' naturally constitutes a private law legal act.

In such cases, the municipality acts as a private party and, in effect, operates under a market governance regime. It should be noted, however, that even when a public sector organisation acts under private law, general principles of proper administration continue to permeate and shape such conduct, influencing the interpretation and application of private law rules (van Ommeren, 1988; Scheltema, 2009; Jurgens, 2011; van Ommeren, 2012; Bröring & de Graaf, 2016; Schlössels, 2021). In that sense, when public bodies engage in private law acts, the public interest invariably plays a role in the background (Schroten, 2000; Huisman & van Ommeren, 2015). In principle, a public body is free to choose the type of legal act it employs, unless the law prohibits such private law actions by

public authorities. Furthermore, the performance of a private law act may not unacceptably circumvent a public law regime (Supreme Court of the Netherlands, 26 January 1990; Scheltema, 2009; van Ommeren, 2012; Borgdorff, 1992; Huisman & van Ommeren, 2015). It can be concluded that the private law legal acts in question neither circumvent any public law provision nor are subject to any statutory prohibition.

A further analysis has been conducted into the granting of personal care budgets. Examination of the documents reveals that applications for these budgets are assessed directly by the municipality, and that the decisions are taken by the municipal board of mayor and aldermen, as prescribed by the Social Support Act 2015 (Article 2.3.2 Wmo 2015; Article 2.6.3 Wmo 2015). The fact that Company 'B' subsequently acts as a care provider is both a common practice and legally permissible.

On the other hand, the percentage of submitted notices of objection is high: 12% in 2023, whereas municipalities of comparable size reported a rate of 3% for the same year. Furthermore, 34% of these objections were upheld, compared to 18% in comparable municipalities. A similar pattern emerges at the appeal stage: 35% of appeals were upheld, compared with 17% in comparable municipalities. In a relatively large number of cases, the municipal decision in question was annulled on the grounds that the municipal board had either failed to prepare the decision with due care or had provided insufficient reasoning.

The declaration of indemnity was granted in the form of a settlement agreement, with the budgetary basis for this remission laid down in the municipal board's decision of 16 April 2024. The conclusion of a settlement agreement falls within the authority of the board as the representative of the municipality and thus constitutes a compliant legal act, if this legal act is assessed in relation to the provisions of private law. However, the decision of the board to enter into such an agreement must also be considered in relation to the municipal council's budgetary rights under the Decree on Budgeting and Accountability, a provision of public law. This budgetary right is safeguarded by the budgeting criterion, one of the three financial compliance criteria of the Decree.

The municipality's 2023 annual report notes that the accountability threshold of €7.8 million for that year was exceeded. The total amount of irregularities was established at €9,839,000. It may be stated that the overrun of € 5.1 million is difficult to reconcile with the budgeting criterion.

4. Evaluation from the perspective of the three rationalities

Some respondents evaluated the case and provided a judgment. In summary, these assessments can be presented as shown in Table 6.

In this case as well, the previously identified complications associated with the unambiguous conceptualisation of the three criteria occur, and in this respect, these complications are confirmed. There is a lack of consensus regarding the objectives the municipality seeks to achieve, resulting in the absence of a clear benchmark for evaluating effectiveness. Identifiable output is also lacking, which complicates the assessment of efficiency. The evaluation of compliance is linked to the specific legal provision applied, while the use and assessment of the same provision allow for multiple interpretations.

Table 6
Evaluation from three rationalities, as indicated by the respondents

Representatives of the political rationality: effectiveness	Representatives of the economic rationality: efficiency	Representatives of the legal rationality: compliance
<p>It can be concluded that Alderman A operates effectively. He not only succeeds in shaping governance in a more coherent manner and in creating and maintaining support within both the municipal board and the municipal council, but also in offering additional services to the municipality’s residents. During 2023, the service package is expanded. This expansion is extended into the years 2024 and 2025 and is reflected in corresponding budget increases.</p>	<p>It can be concluded that the municipality lacks insight into the efficiency actually achieved.</p> <p>Process control is also found to be inadequate. The annual budget does not serve as a guiding framework, budgetary monitoring appears less effective, risk management is configured ambiguously, no consideration is given to a potential principal–agent dilemma, and an analysis of the social district teams points to diminished process control.</p>	<p>It can be concluded that the municipality should have tendered the contract according to the European public procurement procedure, although, according to some respondents, this does not apply to the contract in its entirety.</p>
<p>In terms of budgetary oversight, Alderman B operates less effectively, as the municipality bears the deficit for 2023. Whereas Alderman A actively engages in bilateral consultations and maintains close contact with council members, Alderman B invests significantly less in such interaction. Ultimately, Alderman B becomes isolated in both the General Shareholders’ Meeting of Shareholders and the municipal board.</p>		<p>Assessed in relation to the provisions of private law, the cooperation itself proceeds compliantly. However, the conclusion of the settlement agreement aligns less with public legislation, and is therefore less compliant in relation to public law.</p> <p>While the personal care budget decisions are taken in accordance with the law, their quality is less compatible with the general principles of proper administration, specifically, with the requirements of due preparation and adequate reasoning.</p>

Source: Compiled by the author.

As a consequence, respondents turn to alternative ways of evaluating the actions of public organisations using the three criteria. To do so, they situate each criterion within the rationality underlying it and broaden its conceptualisation.

The three groups of respondents analysed the case in different ways, each selecting distinct components of the case description. In the political analysis, those sections were emphasised that related to how the responsible aldermen pursued their individual objectives, how political support was obtained, and how decision-making processes unfolded. The economic analysis focused on findings concerning budget justification, the design of budget control and risk management, the development of equity, cost allocation methods, and the degree of process control within the district teams. The legal

analysis examined whether the procurement procedure, private law transactions, and the issuance of personal budget (PGB) decisions were consistent with relevant legal provisions and principles.

Because each group emphasised different aspects of the case description, three entirely distinct analyses of the same case emerged.

In all three analyses, the criteria were broadened. In the political analysis, effectiveness was conceived in individual rather than collective terms, taking the objectives of the two aldermen as the primary reference point. The analysis demonstrated that their goals were in conflict and explored the extent to which and the manner in which each alderman achieved their own objectives. This did not lead to an overall judgment of effectiveness but rather to an assessment of how well individual actors succeeded in realising their personal goals. The conclusion was nuanced: Alderman A was considered more effective than Alderman B.

In the economic analysis, it was observed that the intended level of productivity was poorly substantiated, and the achieved level of productivity could not be verified. Consequently, a conceptually precise judgment of efficiency could not be formulated. The analysis, therefore, shifted focus to process control, concluding that the budget was not used as a management instrument and that budgetary monitoring was inadequate. The approach to risk management was described as ambiguous, and the risk inventory failed to provide a complete overview of potential risks. The municipality also appeared to overlook a possible principal–agent dilemma, whereby the contractor could benefit from attributing additional costs to municipal responsibilities. Furthermore, the analysis noted stagnation in the workflow of the district teams.

The legal analysis concluded that the municipality should have conducted a European procurement procedure and therefore acted less compliantly in this regard. Notably, some respondents argued that this conclusion applied only to specific parts of the contract. The private law transactions, by contrast, were deemed compliant. From an administrative law perspective, however, the allocation of additional budget was considered likely to be less compliant. The issuance of PGB decisions was found to be compliant, although the quality of these decisions was judged inconsistent with the general principles of proper administration, rendering the municipality's conduct less compliant in that respect. The legal analysis illustrated that testing against different provisions could lead to divergent judgments regarding compliance and that even applying a single provision could yield multiple interpretations and evaluations of compliance.

The use of three rationalities can result in the same finding from the case being evaluated differently. A striking example concerns the budget overrun of €5.1 million. This overrun was analysed and assessed differently by the three groups of respondents. Representatives of the political rationality linked the overrun to the objectives of Alderman A and concluded that the expansion of tasks associated with the overrun enabled the alderman to realise his goals. Representatives of the economic rationality viewed the overrun as evidence of the limited steering capacity of the budget and as an indication of insufficient process and budget control. Representatives of the legal rationality argued that the budget overrun did not align with the legal principles underpinning sound budgeting and therefore must be regarded as less compliant.

Because broadening a criterion generates multiple norms for that criterion, it is difficult to construct an *a priori* normative framework for effectiveness, efficiency and lawfulness. Respondents indicated that the case description determines which notions and norms from a given rationality are activated in the analytical process. It should be noted that, from within a given rationality, different norms and points of attention may be mobilised during the analysis, yet even within a single rationality, different respondents may introduce different norms and focal points in their analytical reasoning.

This broadening also implies that even within one rationality, a single unambiguous evaluation is rarely possible. For instance, one alderman may act effectively while another does not; under certain legal provisions, the municipality may act compliantly, while under others it may not. Moreover, the same legal provision can be interpreted and evaluated differently in terms of lawfulness.

The rationalities do not contradict one another, as each emphasises a distinct evaluative criterion. For example, the legal rationality does not address efficiency, just as the political analysis does not concern itself with compliance. Similarly, the economic analysis does not consider effectiveness or compliance. It can therefore be argued that the three rationalities complement one another and collectively enrich the overall evaluation.

5. Conclusions and discussion

As in most EU countries, it is prescribed that Dutch public sector organisations must be evaluated in terms of efficiency, effectiveness and compliance. Both in the statutory provisions and in the literature, these three criteria are often conceptualised unambiguously in order to arrive at clear standards and evaluations for each criterion.

However, the application of these criteria can be complicated in practice. This is partly due to the fact that the elements constituting the criteria are not always clearly traceable in the operational practice of public sector organisations. For instance, there is not always a consensus on the desired outcomes to be achieved, which complicates the evaluation of effectiveness. Likewise, the output of a public sector organisation is not always identifiable, meaning a core element essential to the concept of efficiency is absent. Finally, compliance depends on the specific legal provision invoked for the evaluation and does not have a generic character. Moreover, the manner in which a provision is interpreted also influences the ultimate evaluation of compliance.

To evaluate the degree of effectiveness, efficiency and compliance, these criteria can be situated within three distinct rationalities and thereby broadened conceptually. Effectiveness can be positioned within the political rationality, efficiency within the economic rationality, and lawfulness within the legal rationality. Situating a criterion within a rationality allows for multiple ways of conceptualising it and for applying different norms, focal points and analytical approaches. In doing so, the missing elements of the criteria can be complemented, producing a broader and more nuanced understanding of the extent to which a public organisation operates effectively, efficiently and compliantly.

The case study demonstrates the complications described above. In response, the respondents broadened their analyses by positioning the criteria within different

rationalities, which produced additional insights. In the political analysis, effectiveness was conceived in individual terms, taking the objectives of the two aldermen as a starting point. The analysis showed that their objectives conflicted and examined both the extent and the way in which each alderman pursued and achieved these objectives. In the economic analysis, respondents observed that there was insufficient justification for the intended productivity and that the achieved productivity could not be traced. As a result, a conceptually precise assessment of efficiency could not be made. The focus therefore shifted to the degree of process control and the type of risk management applied. The analysis also revealed a principal–agent dilemma and provided insight into the overall process flow. The legal analysis was found to be ambiguous regarding the compliance of the contracting procedure. While the remaining private law actions were deemed compliant, not all administrative law actions were, and concerns were raised about the quality of these acts as well.

These factors resulted in three markedly different analyses in which even one and the same fact from the case was interpreted and evaluated in very different ways. Situating a criterion within a rationality also entails that the criterion may be associated with multiple norms, making it difficult to construct an a priori normative framework for effectiveness, efficiency and compliance. Moreover, embedding a criterion within a specific rationality implies that an evaluation based on this criterion will rarely yield a single, unequivocal judgment.

It should be recognised that an evaluation conducted without a predefined normative framework and without a clear-cut conclusion is primarily aimed at generating understanding rather than passing judgment. This produces a fundamental dilemma: applying the prescribed criteria in public administration practice aims at generating a clear judgment, yet in doing so, various complications may arise. These complications imply that the degree of effectiveness, efficiency and compliance cannot always be traced in accordance with their prescribed conceptualisations. Viewed from a broader perspective, one can obtain an image of how effectively, efficiently and compliantly an organisation operates, but this image is typically non-unequivocal and does not provide a basis for definitive judgment.

Nevertheless, the two approaches are not mutually exclusive. One can assess a public organisation's operations through the prescribed definitions of effectiveness, efficiency and compliance. When such an evaluation is not possible or remains incomplete, it may be supplemented by placing the criteria within a broader rational perspective. This approach yields additional insight rather than a judgment *per se*. In this sense, embedding the evaluative criteria within broader rationalities should be regarded as a complementary form of evaluation.

These supplementary insights are, however, not generalisable. The way in which the criteria are elaborated and operationalised within a given rationality is highly dependent on the specific case at hand. A different case would therefore produce a different elaboration, a different analysis, and ultimately, a different evaluation.

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When Administrative Law Meets Process Engineering

BPMN Modelling, Automation and Interoperability in the Hungarian State Registry Systems

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Abstract: The paper examines the digitalisation of Hungary's public administration registries through an interdisciplinary legal IT lens. It traces the acceleration of records digitisation since the 2000s and identifies fragmentation across sectoral registers as the primary barrier to end-to-end digital services. Methodologically, we combine doctrinal legal analysis with process engineering, using BPMN to model priority procedures and test two questions, namely, 1. whether digitised procedures fit within current Hungarian register law, and 2. what are the challenges that hinder interoperability in both the legal and IT contexts? Our findings demonstrate that BPMN enables verifiable, executable specifications for normative procedures,

supporting RPA and rule-based automated decisions. AI and expert systems can extend capabilities where explainability and override are ensured. The paper argues for a technology-neutral code of state registries and enforceable interoperability, i.e. shared identifiers, data contracts and auditability. We are also proposing improvements to risk management, such as addressing biases, ensuring authenticity and preventing model drift. These improvements will guide the transition to a human-centred, reliable digital administration.

Keywords: process modelling, BPMN, artificial intelligence, digital public records, automated decision making, interoperability

1. Introduction

Collecting and cataloguing data is a key aspect of public administration, and such data may be traced back, in effect, to the very beginning of recorded public administration, going back to some thousands of years. Public administration, encompassing the entirety of social life, covers both state actions and the management of everyday affairs. As these social phenomena are in constant change and transition, public administration must mimic those dynamics and constantly adapt to social, economic and technological changes. A key element of this adaptation is the efficient management of information, for which the system of keeping state registers serves as one of the most important tools and frameworks. As such, we do not consider the keeping of registers to be a separate sector of public administration; rather, it is, in our opinion, a type of activity that supports administrative management and governance, resulting in data sets, which provide the background for public administration decision-making, facilitating information gathering, data analysis, and the performance of administrative tasks.

These registers are essential and indispensable for any efficient and effective system of public administration, supporting both public governance and the interests of society as a whole by ensuring the reliability and transparency of data management. This is ever so in the era of digital public administration, where electronic data management and the integration of IT systems play a key role in enhanced efficiency and speed.

However, with this information revolution, the amount of data needed to be processed has increased considerably as well, and so, due to the large-scale digitalisation of this data, data management and the keeping of state records are facing novel challenges, both methodologically and systemically speaking. Although different legal regimes indeed have varying methods and scopes of data collection, in this study we are considering a particular regime, the digitalisation of Hungarian public records, and we are offering a critical analysis of the preliminary measures necessary for a viable reform.

In Hungary, the process of digitising records has intensified since the 2000s (Cseh & Czékman, 2021), and as a result of the insufficient coordination and lack of centralised control, unrelated and even separate subsystems and sectoral data sets have been developed at different rates and within different legal and technological frameworks. Now, when the efficient digitisation of public administration demands its subsystems to

be able to communicate with one another, requiring algorithmic facilitation of data flow, there is an urgent need to reconsider the classic registration traditions.

In this study, we seek to answer why digitised government registries are unable to communicate with one another, and what obstacles Hungarian legislation must overcome to ultimately achieve the legal and technological interoperability of these registries. The research involved legal and IT experts who used legal and IT tools to examine databases and the legal regulations governing them.

2. Interdisciplinary methodology of research

2.1. Legal and IT languages combined

The primary goal of the research was to contribute to the digital transformation of major government registries. The vast majority of Hungarian government registries now operate in digital form, having transitioned from paper-based data storage and operations over the past few decades. However, this transition has occurred gradually and in a fragmented manner across different sectors, meaning it has been sporadic in terms of both regulation and technology. For instance, the Hungarian Parliament (Országgyűlés) mandated the full digitisation of civil registry records through Act I of 2010, originally setting a one-year deadline for its implementation. However, due to slower technical and organisational development, the law did not ultimately take effect until mid-2014. In contrast, the vehicle registry was already defined as an electronic registry a decade earlier, under Act LXXXIV of 1999. What is more, Act LXVI of 1992, which established the personal data and address registry, had already defined itself as an electronic (i.e. digitised) registry well in the mid-1990s.

This sector-specific variation in digitalisation has also led to significant regulatory and technological differences, which today, among other things, have a significant impact on the interoperability of specialised systems. For this reason, the research required a joint examination of the legal and IT issues of regulation. We employed a research methodology that is fundamentally based on collaboration between legal and IT researchers. As such, our interest lies in the research findings arising from the intersection of the interpretive domains of the two fields, namely the modelability of law and the resulting challenges in both disciplines. It is, thus, an interdisciplinary research by its very nature. Moreover, our study contributes to the long-standing process of research and thought examining the impact of technology on public administration and its development potential, ultimately in the interests of society in Hungary.

2.2. Why (these) records?

In Hungary, government registries are usually managed by sectoral authorities. Therefore, the government agency (usually a ministry) with jurisdiction over the relevant sector essentially bears the substantive legal responsibility for the registries. IdomSoft Zrt.,

established in the early 2010s from former ministerial bodies, was tasked with providing the technological environment and IT-based support for certain core state registries, among other things. These include the personal data and address registry, the vehicle registry, the passport and driving licence registries, and the criminal records registry.

This study is based on detailed research conducted on behalf of IdomSoft Zrt. Therefore, our analysis focused on the registries that the client identified as being most affected by the need for interoperability: the personal data and address registry, the civil registry, the driving licence registry and the vehicle registry.

The four registers examined are core government systems that affect society as a whole, and their digital development is expected to have significant social and economic consequences. The aim of this research is therefore to explore the potential for collaboration between these digitised registers and the conditions for modelling.

2.3. Methodology of the legal analysis

The paper applies a doctrinal legal methodology within an interdisciplinary research framework. Its legal analysis focuses on the normative structure of Hungarian public administration registries, examining the statutory bases, conceptual categories, guarantees, and procedural implications of state records within the evolving legal framework of administrative and digital governance.

Rather than viewing registry law as an isolated body of sectoral rules, the study interprets it as a legal infrastructure that underpins public administration. Particular attention is dedicated to legality, public authenticity, data disclosure, procedural safeguards and inter-registry cooperation. From a methodological perspective, the doctrinal inquiry is problem-oriented, assessing whether existing Hungarian legislation provides an adequate legal basis for the digital modelling of administrative procedures and whether it can be expressed in a form suitable for algorithmic interpretation.

This legal analysis is paired with process engineering and modelling. This is not intended as a substitute for legal reasoning but rather as an analytical instrument for testing the internal coherence, executability and regulatory completeness of legislation. The paper's legal method, therefore, combines conceptual analysis, statutory interpretation, and systemic evaluation with a functional examination of how legal norms operate when translated into digital administrative processes, automation and interoperable state registry systems.

2.4. Process-engineering protocol and validation criteria

The development of administrative systems is closely linked to the development of information and communication technologies. Process modelling tools widely used in engineering and business management, such as *Business Process Model and Notation* (BPMN), effectively support the precise description and analysis of administrative processes. This facilitates more informed decision-making and higher-quality service

delivery. In addition, they offer the possibility of recording legislation in a structured, digitally processable form, creating the basis for automated process control.

From an IT perspective, the modelling was carried out as a structured process-engineering protocol rather than as a merely illustrative diagramming exercise. First, the relevant legal provisions were decomposed into operational units: actors, triggering events, required data inputs, authoritative registers, procedural activities, decision points, deadlines, outputs and possible remedies. Second, these units were mapped to BPMN elements: start and end events, user tasks, service tasks, gateways, message events, data objects, pools and lanes. Third, the resulting models were checked against three criteria: syntactic validity, legal traceability and algorithmic interpretability. By syntactic validity, we mean that the BPMN model follows the notation rules and contains no dead ends, unresolved branches or missing termination points. Legal traceability means that each activity or gateway can be linked back to an identifiable legal rule or administrative requirement. And algorithmic interpretability means that the model contains sufficiently explicit conditions, data inputs, and decision rules to allow transformation into a rule-based workflow or executable decision-support specification.

Figure 1 summarises the modelling logic applied in the study. It shows how legal rules were translated into procedural elements and BPMN representations, and how the model was then used to distinguish between descriptive modelling, executable modelling and automated decision-making. The figure also highlights the main methodological boundary of the analysis: the capacity to model a process in BPMN does not in itself imply full legal or technical suitability for automation.

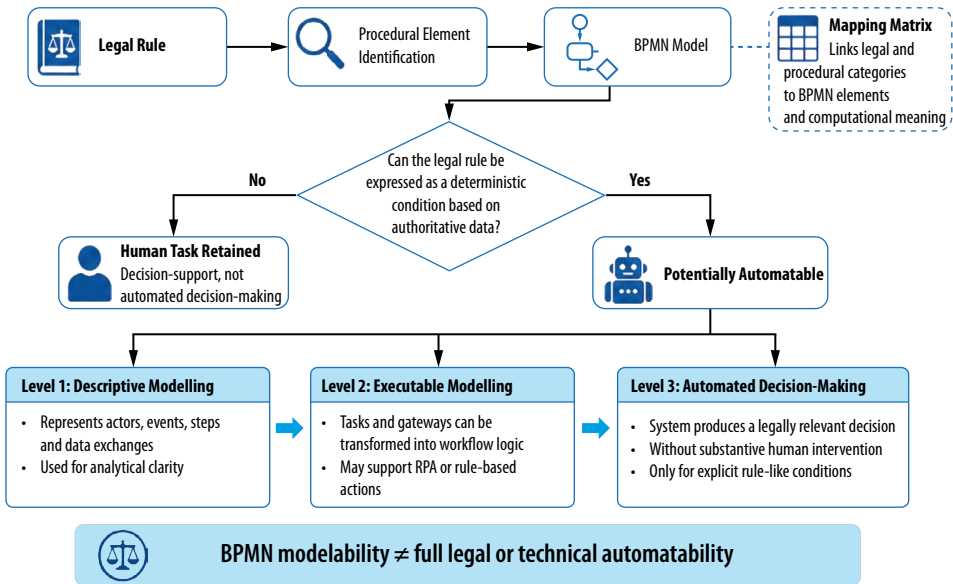


Figure 1
From legal rules to BPMN modelability and automation boundaries
Source: Compiled by the authors.

To make this logic more transparent, Table 1 presents a simplified mapping matrix linking typical legal or procedural categories to BPMN elements and their possible computational interpretation.

Table 1
Mapping legal norms to BPMN and computational elements

Legal/procedural category	BPMN element	IT interpretation	Validation criterion
Application submitted by citizen	Start event / message event	Process trigger	Is the input channel and timestamp identifiable?
Competent authority	Pool/lane	Responsible system or organisational actor	Is responsibility unambiguous?
Data request from public register	Service task / data object	API call or register query	Is the authoritative data source defined?
Legal condition	Exclusive gateway	Boolean rule / decision predicate	Is the condition formal and machine-checkable?
Discretionary assessment	User task / manual review	Human-in-the-loop decision	Is discretion legally required?
Notification / decision delivery	Message event / end event	Output generation and delivery	Is the communication channel auditable?
Appeal or legal remedy	Event subprocess	Exception path	Is the remedy path preserved?
Missing data / contradiction	Error event / exception flow	Data quality or legal inconsistency flag	Is the inconsistency logged and reviewable?

Source: Compiled by the authors.

Table 1 should be read as a concise mapping matrix that clarifies the modelling logic applied in the study. It shows how typical legal and procedural elements can be represented in BPMN and how their computational meaning can be assessed. This distinction is important because the mere representation of a procedural step in BPMN does not automatically make it suitable for automation. Where a legal rule can be expressed as a deterministic condition based on authoritative data, the corresponding BPMN gateway may be considered potentially suitable for automation. Where the legal rule requires evaluation, balancing, discretion, or proportionality, the model should retain a human task and should be classified as decision support rather than automated decision-making.

2.5. Research questions

One of the key questions of the study is how the system of public administration records can be integrated with modern information and communication technologies, and how they can be standardised to make public administration procedures more efficient.

Exploring this issue is important both from a theoretical and practical point of view, as recently digitisation and automated decision-making are among the fundamental challenges for public administration systems.

The study examined the systematic characteristics of administrative records, their legal and technological background, and how these systems could be integrated with the latest IT tools, with legal and IT researchers conducting the analysis. The study was based on two fundamental questions:

1. Is it possible to model digitised administrative processes within the current legal framework for Hungarian state records?
2. What are the challenges that hinder interoperability in both the legal and IT contexts?

The research is therefore interdisciplinary, bridging the gap between technological and legal regulatory platforms. Exploring the potential of developments in information and communication technology and artificial intelligence (AI) will have a significant influence on the future functioning of public administration.

3. First step: Laying the groundwork for a process-based interpretation of public records

The essence of public administration lies in its dynamic, activity-based components. It must therefore be understood as a kind of “action” or “operation”, and as such, it is necessarily a process (Waldo, 1955, pp. 5–6; Varga, 2017, pp. 90–91). This constant dynamic movement presupposes that public administration has sufficient information to function correctly and efficiently, including information about its own internal workings and the surrounding domestic and international external reality.

For public administration bodies to function properly, they need systematic support in the form of information gathering and data management. They obtain this primarily from registers and official statistics, which are considered reliable sources of data. All of these perform a supplementary and supporting function in public administration. While registers primarily serve public administration, they have now developed a secondary purpose of serving the needs of society and the economy. These heterogeneous registers, statistics and other *ad hoc* data reporting systems thus form a unified system with the same purpose, which can also be regarded as an information infrastructure.

Registers can also be interpreted as constituting a fundamental unit, or “building block”. It is evident that data derived from registers and procedural processes can function as a foundational element for the development of information technology. Consequently, this data can play a pivotal role in the identification and implementation of legal development trends. Needless to say, however, the legal environment is currently confronted with a series of challenges that have emerged in response to technological advancements. It is imperative for public administration to compete with these

technological solutions, and it is advisable to implement solutions that can benefit both the back and front office sides of public administration. Given the predominance of these technological solutions within the business sphere, it is pertinent to investigate the potential for the implementation of best practices in both public administration and the business sector. And it appears that the BPMN modelling standard can be classified as one of these best practices (Torres et al., 2010, pp. 114–120).

BPMN has been demonstrated to facilitate comprehension of the sequence of individual public administration processes, including procedures pertaining to registers. Furthermore, it has been shown to translate legislation into a “common language”, from which subsequent technological solutions can be derived. In order to comprehend the modelling of registers using the BPMN method and to identify the nodes that arise in individual procedures, it is first necessary to address the systematic issues of registers.

Records are understood to be the systematic organisation and recording of information that is necessary for performing tasks in a way that can be explored (Horváth, 1999, p. 169). A register is defined as a static data set, namely a collection of information that has been gathered and recorded according to predetermined criteria. That is to say, it is a collection of systematised facts (Torma, 2005, p. 620). The dynamics of registers are determined by data movement, i.e. data entry, data modification, data deletion, data locking and data destruction. The disclosure of data does not result in a modification of the data content of the register; rather, it serves to create an imprint of the data’s status or alterations over time, akin to the manner in which a photograph is created. This may manifest in the form of an official certificate, a court extract, or other special public document.¹

Within the framework of state data management, the Hungarian legal scholarship distinguishes between two basic types of registers: 1. state registers containing data from individual administrative sectors, regulated by normative requirements and legal guarantees, and 2. administrative registers, which are not bound by legislation and are intended to support the internal functioning, economic, HR and other functions of the authorities (Budai et al., 2018, pp. 177–178). In our research, we examined the regulatory systems of the Hungarian state registers of personal data and addresses, birth records, motor vehicle registration and driving licence registration.

The most important feature of public registers is that they are established and maintained by a public authority on the basis of a law or a local government decree authorised by law.² Another important feature is that they are maintained by a public authority or a non-public authority authorised by the state.³ With regard to the former, a more precise definition is that a legal entity under public law⁴ may maintain a register, since not only the state or one of its bodies may maintain a register, but also local

¹ The court communicates the extract in the form of a decision. See Section 88 of Act CLXXXI of 2011 on the court registration of civil organisations and related procedural rules.

² For the legal basis see Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) Article 6(1)(e). Less frequently, but still possible, decentralised registers may be made mandatory by law and maintained by local or regional authorities. Such registers also share the characteristics of state registers.

³ Examples of the latter are the registers kept by public utilities.

⁴ For the definition of legal personality under public law, see Patyi and Varga (2012) and Tamás (2014).

governments or atypical administrative institutions (such as public bodies or public institutions). Act CL of 2016 on General Public Administration Procedures (hereinafter: Procedure Act), and Act CCXXII of 2015 on Electronic Administration and the General Rules of Trust Services (hereinafter: eServices Act) both refer to “legally regulated public registers”,⁵ which form part of the state registers in our study.

In Hungarian legislation, significant reforms were introduced on 1 September 2024 with the repeal of the eServices Act Section 36 of Act CIII of 2023 on the digital state and certain rules for the provision of digital services (hereinafter: Digital Citizenship Act). Among the conceptual distinctions, it is also important to note that ‘state registers’ are not the same as ‘official registers’. The latter are a narrower category within state registers, which the Procedure Act covers and works only in the framework of public procedures. However, there are state registers which, although established by law, are not covered by the Procedure Act, such as the company register or the register of civil organisations.

The main feature of state registers is that all their characteristics – in particular their scope, publicity and the person responsible for maintaining them, as well as special data protection provisions – are established by law. Similarly, the primary regulations that govern the provision of data from the register and the fulfilment of the obligation to provide information are also established by law.

The prevailing principles that govern public registers, in addition to the dominance of the principle of legality, are the principles of public credibility, accuracy, timeliness, expediency and completeness (Torma, 2005, pp. 620–622). The principle of public credibility is of particular interest, given that the status of public credibility remains an open question in public administration science to this day. State registers, which are regarded as credible in a public sphere, document (or, in some cases, create) the legal status of individuals and state interests. The content of these registers is subject to legal regulation and state interests. In such cases, registration serves as a foundation for safeguarding the legal status that has been attained. While there is an obligation to accept the registered data, the possibility of rebuttal exists. The refusal, modification or deletion of a registration is considered an official decision and may be appealed (Horváth, 1999, p. 173), but the registered data is presumed to be true until proven otherwise (Gerencsér & Berkes, 2014, p. 29).

The shortest answer to the question of what makes a register authentic is that it is stated in legislation, either implicitly or explicitly. For example, the law on the land register or the company register expressly mentions the public authenticity of the registers. In contrast, the law on the address register failed to do so for a long time and only stated public authenticity in its explanatory memorandum. Still, the presumption was also included in the law in this case. In such a manner, Gerencsér and Berkes (2014, p. 30) and Kisfaludi (2003, p. 8) argue, having their conclusion based on specific legal rules, that in many cases these rules only state that the regulated register is authentic, but no uniform concept can be defined with regard to its content.

The Constitutional Court has imposed a further substantive requirement on public credibility. According to Decision 15/1995 (III. 13.) AB, a public register must be open

⁵ Section 36(2) of the Act, Section 20 of the eServices Act.

to the public, the data, registered rights or facts contained therein must be accessible, public authenticity may also function as a guarantee of constitutional rights, its essential content cannot be restricted and it must correspond to reality. But this is only valid to a limited extent, which is why it is possible to provide counter-evidence, yet for the sake of legal certainty, this can only be allowed for a limited period of time.⁶ From the perspective of legal practice, a 2011 ruling by the Supreme Court⁷ stated that “from the point of view of a register, public credibility means that the entry, modification and deletion of data that can be entered in the register modification and deletion of data that can be entered in the register may only be carried out by a body authorised to do so by law, in accordance with the procedural rules laid down in law and on the basis of documents specified in law, thereby guaranteeing the accuracy, completeness and reliability of the register”.

The decision also stated that the rights and facts recorded in public registers can only be changed in court proceedings if proven otherwise. In practice, this means that public credibility has no real substantive requirements; it only means that no one has provided evidence to the contrary. Although justified from a legal point of view, this approach does not strengthen confidence in the registers at all, as public credibility is currently linked not to the factual content of the data, but to the legal context attached. In our opinion, in addition to the legal presumption, it would be necessary to provide guarantees for the security of the data as well, something utterly missing from the current regulation.

In conclusion, registers are of paramount importance and effectively serve as the “building blocks” of public administration. It is no exaggeration to say that the operation of the state would be inconceivable without registers. However, in order for registers to function efficiently and accurately, developments and improvements are essential. This necessity must be reflected in both legislation and the technological environment. A key consideration is whether individual administrative processes can be transferred to a model system, primarily used in the economic environment, which is capable of identifying points of intervention. On these points, an efficient, automated and, last but not least, customer-oriented administrative system can be built in the future through further development. Consequently, the *information and communication* technology (*ICT*) side of the developments must also be examined, that is to say, which methods will facilitate the implementation of effective automation in the future.

4. Second step: Modelling administrative processes from an ICT perspective

In our preceding analysis, we have endeavoured to outline such a technological framework for the research with which administrative (management) professionals are familiar and prone to use regularly. As such, we refrained from limiting the technological framework to tools used by the government alone, and, instead, sought proven process analysis methods employed by stakeholders and meeting recent ICT standards.

⁶ Decision 15/1995. (III. 13.) AB, ABH 1995, 88, 90.

⁷ Gfv.X.30.004/2011/9.

The development of information and communication systems entails corresponding advances in public services and government systems. In order to provide services, it is necessary to develop IT systems that comply with the processes laid down in legislation and to ensure standardised and secure access to various data sources (electronic data provision from registers). During the implementation of IT systems, five basic process activities of software development can be distinguished (Sommerville, 2016): 1. *specification* (identification and definition of functional and non-functional requirements, and their validation); 2. *design* (architectural, interface, component, data structure and algorithm design); 3. *implementation* (realisation of the designed system); 4. *verification* and *validation* (component, system, and functional tests to check whether the implemented system complies with the specification: whether the right system has been built and whether it has been built correctly); and finally, 5. *evolution* (ensuring the ongoing development and maintenance of the system).

Focusing on specification and design activities in the context of state registers requires examining how the legislation defining a given register can be formalised so that any implementation based on it meets expectations as closely as possible. Notably, planning can also have an impact on legislation: during formalisation and structured description, any inconsistencies, redundancies, or efficiency problems may become apparent at a stage when changes are still possible.

For IT systems, a structured design approach involves the use of process modelling tools. The modelling toolkit includes a notation system that can dynamically model not only the structure of the IT system being implemented, but also its behaviour.

The BPMN method we have decided to use originated in the work of the Business Process Management Initiative (BPML.org), with contributions from several industry participants, including IBM, Oracle, SAP, Software AG and others. Following the merger of BPML.org into the Object Management Group (OMG), the BPMN specification was published (version 1.0 in 2004, version 2.0 in 2011). The aim of creating BPMN was to develop an easy-to-understand notation system for all stakeholders in organisations and business life: business analysts (for initial process design), technical developers (for implementation and automatic generation of internal models), and business people (for monitoring and management).

The central element of BPMN modelling⁸ is the organisational process diagram (*Business Process Diagram*). The process diagram can be divided into *pools* and *lanes* according to the actors or functions involved in the process. Clearly distinguishable components in each lane describe the individual steps of the process:

- *Events*: “occurrences” in the process that affect its course. An event can be 1. a start event, which signals the start of the process; 2. an intermediate event, such as an incoming message or notification; 3. a closing event, which signals the end of the process.
- *Activities*: Components representing work, tasks or active steps in the process.

⁸ For a detailed description in the documentation of a standard modelling tool see <https://camunda.com/bpmn/reference>

- *Gateway*: A component positioned at the divergence and convergence points of alternative or parallel paths in the process flow, determining which branch or branches the flow continues along and subsequently merging those paths. It can be exclusive, inclusive, parallel, or event-based.
- *Artefact*: elements used for annotation and grouping within the diagram.

However, the capacity to model a process in BPMN should not be equated with full legal or technical automation potential. A BPMN model can represent deterministic, discretionary and exception-based procedural elements alike. Therefore, in this study, the models were interpreted on three levels. The first is the descriptive modelling level, where the process is represented for analytical clarity. The second level is executable modelling, where tasks and gateways can be transformed into workflow logic or RPA-supported actions. Finally, the third level is automated decision-making, where the system produces a legally relevant decision without substantive human intervention.

Only those parts of the procedure that are based on explicit, rule-like conditions and authoritative register data can safely move from the first to the second or third level.

Although the context of business processes differs in many respects from that of public administration processes, their structure and building blocks are the same, so the same toolset can be used to describe public administration processes (with some adaptation). This is why the modelling structure, elements, tools and descriptions have spilt over from the business sphere (Corradini et al., 2015).

The uptake of information and communication technologies in public administration has been particularly evident in electronic communication with citizens, document management, and the development of administration back-end systems, as a result of which electronic administration is now feasible across an ever-growing range of areas. At the same time, the potential of information and communication technologies is far from being fully exploited. For information and communication technologies to support public administration more effectively than at present, legislators need to shift to a process-oriented approach when drafting regulations on types of administrative matters. One useful tool for a process-oriented approach is the use of BPMN diagrams.

With regard to administrative processes, a challenge is that some of them can be modelled in several ways (e.g. due to different levels of abstraction). This can cause problems when models are shared between organisations (or even within an organisation) and the task is, for example, to merge them. This problem can be managed by designing processes from reusable modules (sub-processes, elements). Legislation allows for this kind of abstraction, as similar situations in life must be resolved using similar procedures (processes). Even though the areas of specialised administration are different, many of their sub-processes (e.g. applications, summonses, notifications, rectification of deficiencies) can be described in a uniform manner.

At the same time, a significant part of administrative legislation is not currently prepared from a process perspective, and legislative drafting is not preceded by the careful planning and structuring of an operational model, which could result in a technical text describing a process or algorithm (Kregel et al., 2022). A more prominent role for the process approach in legislation would have numerous advantages: it would facilitate the

implementation of processes in information and communication systems, provide opportunities for process optimisation, and enable quantified performance measurement and more effective comparative control.

5. Technological challenges for public administration

Next to interdisciplinarity, outlined above, the rapid pace of digitalisation is forcing the legal system, and thus public administration, to keep pace with innovations and continuously integrate new technologies. All this poses serious challenges to which public administration must respond. In the following, we outline the key challenges that will determine the future direction of Hungarian public administration.

Among the primary factors, generational differences and attitudes towards technology deserve special attention. Public administration must simultaneously meet the expectations of the younger generation, who increasingly want to access public services via electronic platforms and online administrative systems, and the needs of the older generation, many of whom are less familiar with the use of digital tools (see e.g. Ofoma, 2024, p. 98). This difference may become an increasingly practical issue in the near future, especially in light of the introduction of digital citizenship. The question arises as to what proportion of each age group will register and become active users of the new system. This is a major administrative challenge worldwide, which so far only Estonia has successfully addressed, with 93% of the population already conducting their administrative affairs online (Halmos et al., 2023). In addition to intergenerational differences, strengthening the relationship between the state and the individual is also a key issue, as the acceptance and active use of digital services will only be possible if users' trust in the system is strengthened.

Beyond social aspects, technological development also plays a decisive role in the digitisation of public administration. Today, information and communication innovations emerge rapidly, with AI, automation, expert systems, and digital citizenship solutions being particularly noteworthy. It should be emphasised that Hungarian public administration is currently on the verge of a significant transformation: with the repeal of the eServices Act and the entry into force of the Digital Citizenship Act in 2024, the electronic public administration system and its tools will also change significantly.

In terms of chronological limitations, we must disclose that our study reflects developments as of March 2025, and we deliberately do not intend to meddle with the technological aspects of ICT challenges, as those would, in our opinion, constitute a separate and technical inquiry only loosely connected to the core arguments of this study. As such, in the subsequent analysis, we confine our attention to strictly speaking legal problems.

6. ICT challenges for legislation

In terms of legislative problems, it is paramount to acknowledge, right at the outset, the presence of deficiencies within the Hungarian legal system, which impede the effective

implementation of these novel solutions. A salient problem is the absence of a registration code and the issue of interoperability in relation to the harmonisation of registers.

A common feature of state registers is the absence of a common set of rules that would regulate the guarantee issues of register management in a general manner. There are no uniform regulations on data collection, storage or processing that would apply as general rules to the most diverse registers. Section 97 of the Procedure Act exclusively pertains to official registers, and even in this context, it merely establishes a legal presumption of public credibility among the legal guarantees. The section addresses procedural matters, including the finality of decisions. However, there is still no mention of the issues of data disclosure or confidentiality, and there are no general rules on cooperation between registers.

Sectoral registers thus remain isolated, incapable of cooperation, resulting in the utilisation of data being only partial. The absence of uniform regulations can be ascribed to the fact that state registers were established by specific pieces of legislation, namely, administrative and sectoral legislation. In each instance, the founding norm comprises the data set that the register is required to contain, in addition to the minimum set of procedural rules necessary for the operation of the register and data management. The deficiencies of the system may also be attributed to the varying degrees of sophistication of the normative backgrounds of the various registers. This demonstrates the significance of establishing a document code, as it would enable the harmonisation of the individual registers under a unified set of regulations, thereby facilitating data movement between registers, enhancing interoperability, and eliminating regulatory disparities between them. It is posited that this code of documents could encompass both general substantive and procedural rules relating to registers. Moreover, the document code would facilitate the task of law enforcement officials, as it would no longer be necessary for them to identify solutions to specific issues in individual sectoral laws. Instead, they would be able to locate the specific rules for each sector within the document code itself (Ilosvai, 2023, p. 71). However, this raises the need for not only legal but also technological harmonisation (Veszprémi, 2018a, pp. 71–72).

Another source of problems stems from shortcomings in interoperability. The capacity for registers to function collectively, that is to say, their interoperability, is emerging as a fundamental prerequisite for the effective and extensive provision of public services. However, it is crucial to note that this principle must be applied not only to registers but to all electronic services. The interoperability of e-government services is not only in the interest of the state, but also of the European Union. The European Commission has developed an ‘interoperability maturity model’ (IMM). Its aim is to provide Member States’ public administrations with a tool for measuring their own level of interoperability maturity and for determining the priorities necessary for the next stage of development of the interoperability of e-government systems (including, for example, registers).⁹

In Hungary, the interoperability of electronic systems still needs significant development (Veszprémi, 2018b, p. 181). This is also supported by European indicators such as the *Digital Decade indicator* and the *eGovernment Benchmark*. Section 72 of the

⁹ See https://ec.europa.eu/isa2/sites/isa/files/interoperability_maturity_model.pdf

eServices Act was the first to stipulate that registers containing address data must be able to work together. In order to achieve this goal, in the absence of a common platform, the law created a new register, the “central address register”. In order for the personal data and address register and the real estate register to be able to interoperate with the water register or the mining register, or possibly with the register of licensed commercial service providers at the local level, both legal and IT developments are required. However, until adequate, mature interoperability is achieved, the previous¹⁰ and the present Procedure Act and eServices Act have made a very important advance, as they state that data that is public or that must be included in a legally established public register cannot be requested from the customer. Section 5(1) of the Digital Citizenship Act establishes the general principle of interoperability, and it can be clearly inferred from this provision and Section 1(e) that the coordination of individual state registers will (may) be developed in order to implement Section 5. As a result, the provision of Section 5(2) of the Digital Citizenship Act, according to which users cannot be obliged to repeatedly provide data available in digital space, solves a long-standing problem in public administration. This provision transforms cooperation between registers into a legal obligation. Ultimately, it is expected that the obligation to cooperate will increase the level of interoperability.

7. Conclusion: What is next for e-government?

Hungary’s registries have reached a turning point where decades of sectoral digitisation must be consolidated into a coherent, manageable and interoperable whole. Our analysis confirms that registries remain essential “building blocks” of government operations and service delivery. However, it is evident that their legal guarantees, technical interfaces, and operational practices have developed unevenly since the 2000s. In order to move forward, it is not sufficient to rely solely on technological advances; rather, there is a need for a meticulous integration of legal planning and system design. In practice, this means that legislation must consider both processes and technology, i.e. interoperability must become a fundamental requirement, and it must be ensured that automation and AI increase rather than undermine legality, transparency and trust.

The most important legal conclusion of the research is that a general, technology-neutral registration code appears to be necessary in Hungary. The contemporary situation is characterised by the fragmentation of sectoral norms, giving rise to deficiencies in credibility, access, data disclosure and cooperation obligations, which in turn impede the delivery of end-to-end digital services. The establishment of a codified baseline, encompassing the domains of data lifecycle, public authenticity, disclosure/confidentiality, verifiability and inter-registry cooperation, would serve to streamline the guarantees that are currently dispersed across a range of specific laws, aligning them with contemporary technical controls, including integrity protection, provenance and time stamping. The research has demonstrated that such legislation should be developed with process

¹⁰ Act CXL of 2004 on the general rules of administrative authority procedures and services.

models in mind. BPMN-based models have the capacity to reveal inconsistencies and regulatory gaps, and can become effective monitoring and impact assessment tools. In the context of automated processes, it is imperative that the guarantees of fair procedure are explicitly delineated. This encompasses the necessity of substantiation, comprehensive logging, and the provision of a legal remedy and the opportunity for human review in instances where rights have been infringed.

Drawing upon the findings of research in the field of information technology, it is imperative to employ modelling techniques prior to the initiation of development projects. Furthermore, it is essential to ensure that secure and verifiable interoperability is prioritised as the default setting. Canonical BPMN models for high-volume procedural components – applications, notifications, deficiency correction and data validation – should be validated with legal owners and converted into executable rule sets. The concept of interoperability necessitates the utilisation of shared identifiers, common data contracts, event interfaces and hardened data-provision services between registers. These processes are supported by uniform authentication and authorisation mechanisms.

AI and expert systems can extend these gains, provided they are applied where they are most appropriate. The associated governance layer – including model risk classification, data set governance, bias and performance monitoring, logging and override mechanisms – must be defined in advance. Meanwhile, digital exclusion remains a significant constraint. The effectiveness of assisted digital channels and accessible design will be crucial in determining the outcome of reforms in terms of equitable distribution, especially as digital citizenship tools continue to develop.

Returning to the two research questions formulated in the introduction and methodology, the analysis allows for a differentiated answer rather than a simple affirmative or negative conclusion.

Regarding the first research question, the study came to the conclusion that digitised administrative processes can be modelled within the current Hungarian registry framework, but only if the model preserves the legal guarantees of competence, public authenticity, data protection, notification, reasoning and legal remedy. BPMN is suitable for representing these guarantees because it can express actors, events, decision points, data exchanges and exception paths. The modelling of personal identity card applications and the procedure for placing a motor vehicle into circulation confirms that BPMN can make the procedural structure visible and can identify those segments where workflow support, RPA or rule-based automation may be introduced without undermining legal safeguards.

Regarding the second research question, the study found that interoperability is constrained by a combination of fragmented legal authorisations, uneven sectoral regulation and heterogeneous technical architectures. From a legal perspective, the main obstacles are the lack of uniform rules on data sharing, public authenticity, responsibility for data quality, access rights and inter-registry cooperation. From an IT perspective, the key barriers are the absence of shared identifiers, common data models, standardised data contracts, stable interfaces, event-based communication and uniform logging and audit mechanisms. These obstacles are mutually reinforcing: even technically feasible data exchange cannot be implemented safely without a clear legal basis, while legally permitted cooperation remains ineffective if the underlying systems cannot communicate in a secure,

verifiable and semantically consistent manner. Therefore, interoperability should be understood not merely as a technical integration problem, but as a joint legal, organisational, semantic and technical design requirement.

The risk environment is clear. Over-automation of discretionary cases jeopardises fairness, fragmented authenticity guarantees undermine trust, and IT solutions must not undermine legitimate legal rules and norms. And so, success must be measured and not merely assumed.

It is the responsibility of experts to monitor direct processing rates, average decision-making times, the success of data exchange between registries, the elimination of duplicate data requests, the enforcement of legality and appeal rates. The ultimate success of legal planning and system design will be determined by user acceptance, which is to be broken down by demographic groups, in order to ascertain whether the services actually used by people are in line with the planning and design.

In summary, the transition from isolated digitisation to a reliable, explainable, citizen-centred digital state is contingent upon the recognition of records as a regulated digital infrastructure and legislation as a first-order requirement. By institutionalising process-oriented lawmaking, enforcing interoperability, and introducing automation and AI within a robust governance framework, Hungary can transform two decades of gradual development into a strategic, sustainable public administration architecture.

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Governing the Perceptual Infrastructure

Public Administration in the Age of Algorithmic Perception

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Abstract: Artificial intelligence systems increasingly shape not only what information citizens access but the interpretive frameworks through which they perceive public affairs, posing a governance challenge that public administration scholarship has yet to theorise. Through conceptual and normative analysis, the paper develops the construct of *perceptual infrastructure* – the cognitive and informational substrate of democratic deliberation – drawing on information theory, public administration and regulatory-governance scholarship, and tests it against the EU regulatory architecture. The analysis shows that the algorithmic construction of perceptual frameworks constitutes a distinct governance domain that the EU AI Act and the Digital Services Act do not reach, owing primarily to a regulatory omission rather than an implementation deficit: existing provisions take systems, use cases and identifiable harms as their object, not the cumulative, longitudinal construction of perception. An accountability framework is proposed – incorporating aggregate transparency, perceptual sovereignty as a citizen right, proportional responsibility and meta-perceptual literacy – with concrete implications for administrative accountability, regulatory capacity and democratic resilience.

Keywords: AI governance, algorithmic accountability, democratic governance, public administration, perceptual infrastructure, EU AI Act

1. Introduction

Democratic governance depends upon citizens sharing sufficient common ground to perceive, deliberate about, and respond to public problems collectively. The common ground is not merely a matter of shared values or civic commitment; it requires sufficient overlap in the informational frameworks through which citizens perceive political events, policy proposals and social reality. When algorithmic systems systematically construct

divergent perceptual frameworks for different segments of the population, they undermine the epistemic foundations upon which democratic self-governance rests.

The paper addresses a governance challenge that public administration scholarship has yet to adequately theorise: artificial intelligence systems exercise power not merely by controlling what information citizens access but by shaping the interpretive frameworks through which citizens perceive public affairs. The process can be termed the *algorithmic construction of perceptual frameworks* – the systematic, large-scale and typically opaque process through which AI systems build the perceptual conditions under which citizens encounter and process information relevant to democratic governance. Taken together, these frameworks constitute what may be termed the *perceptual infrastructure of democracy* – the cognitive and informational substrate upon which deliberation, accountability, and collective decision-making depend.

The distinction between content and perceptual infrastructure matters profoundly for public administration. Consider two citizens encountering identical news coverage of a public health policy. Both see the same data: infection rates, hospitalisation figures and economic projections. Yet one perceives a responsible government response to a genuine crisis, while the other perceives authoritarian overreach justified by manipulated statistics. The factual content is identical; the information each citizen perceives is fundamentally different because years of algorithmically curated exposure to different sources, arguments, and interpretive patterns have constructed divergent perceptual frameworks. The problem is not that citizens disagree about shared facts; it is that they perceive different facts from identical data. The condition characterises the post-factual governance environment, in which the erosion of shared epistemic foundations creates administrative and policy crises that conventional informational remedies cannot resolve (Alibašić, 2024).

For public administration specifically, the stakes are threefold and concrete. First, *administrative accountability*: when public servants rely on AI decision-support tools, the perceptual frameworks those tools construct shape discretionary judgment in ways that current accountability mechanisms – designed to audit decisions, not perception – cannot easily reach. Second, *regulatory capacity*: agencies tasked with overseeing algorithmic systems require analytical competencies for assessing cumulative framework effects that few presently possess. Third, *public value and democratic resilience*: the capacity of administrative systems to coordinate collective responses to crises depends on a citizenry able to perceive shared evidence, a precondition that framework fragmentation directly erodes. These three concerns – accountability, capacity and resilience – organise the practice-facing analysis in Section 6, to which the recommendations return.

Existing governance responses focus primarily on content moderation and algorithmic transparency (Diakopoulos, 2015; Gillespie, 2018). While essential, these approaches address the surface manifestations of a deeper structural challenge. The EU AI Act [Regulation (EU) 2024/1689], despite representing the most comprehensive regulatory effort to date, classifies recommendation systems and algorithmic curation as limited-risk or minimal-risk applications, underestimating the cumulative effects on democratic governance of sustained algorithmic shaping of citizens' perceptual frameworks (Yadav, 2025). The Digital Services Act (DSA), while imposing algorithmic transparency

and risk assessment obligations on very large online platforms (VLOPs), similarly addresses individual content decisions and systemic risks without recognising the gradual construction of perceptual frameworks as a distinct governance domain.

The paper makes three contributions. First, it develops a theoretical account of how algorithmic systems reshape the perceptual infrastructure of democracy, grounded in the principle that information emerges through the interaction of perception and interpretive frameworks. Second, it analyses the implications for democratic governance, public sector accountability and administrative decision-making, with attention to the regulatory limitations of current instruments, including the EU AI Act and the DSA. Third, it proposes an accountability framework tailored to the challenge of governing algorithmic influence on democratic perception, extending existing regulatory approaches to address the gap.

The paper proceeds as follows. Section 1.1 states the methodological approach and research question. Section 2 establishes the theoretical foundations. Section 3 develops a taxonomy of algorithmically constructed frameworks. Section 4 analyses the EU regulatory architecture's limitations regarding perceptual infrastructure. Section 5 proposes an accountability framework. Section 6 examines implications for public administration practice, with attention to contexts of democratic fragility. Section 7 acknowledges limitations and identifies future research directions. And Section 8 concludes.

1.1. Approach and research question

The paper is a work of conceptual and normative analysis. Rather than testing hypotheses against new empirical data, it develops a conceptual apparatus for an emerging governance problem and derives normative implications for regulatory and administrative practice. The guiding research question is: *How does the algorithmic construction of perceptual frameworks challenge existing democratic-governance and public-administration arrangements, and what accountability mechanisms would address the resulting governance gap?* Three sub-questions structure the analysis: 1. What conceptual account best captures the phenomenon (Section 2)? 2. Where do current EU regulatory instruments fail to reach it (Section 4)? 3. What governance response follows (Sections 5–6)?

The analysis proceeds in three steps. First, *conceptual construction*: foundational work in information theory (Shannon, 1948; Bateson, 1972; Floridi, 2011), surveillance capitalism and algorithmic regulation scholarship (Zuboff, 2019; Yeung, 2018), and democratic theory (Habermas, 1996; Landemore, 2013; Dryzek, 2000) is synthesised to develop the construct of *perceptual infrastructure*. Literature was selected purposively for conceptual relevance to the relationship between information, perception and democratic deliberation, prioritising foundational and high-citation works that define the relevant constructs rather than aiming at exhaustive coverage of any single field. Second, *regulatory gap analysis*: the EU AI Act and the Digital Services Act are read against the construct, asking which risks each provision recognises and which it excludes (Section 4). Third, *normative derivation*: an accountability framework is inferred from the gap identified, distributing responsibility across the actors with the capacity to shape outcomes (Section 5).

The limitations inherent in this approach are noted in Section 7: conceptual-normative work generates frameworks and hypotheses rather than validated findings, and the constructs proposed here await empirical operationalisation.

2. Theoretical foundations

2.1. Information as perception given a framework

The analysis is grounded in a specific definition: information is perception given a framework. The formulation draws on and extends foundational work in information theory while resolving tensions that have limited governance applications.

Shannon's (1948) mathematical theory of communication provided quantitative rigour but explicitly excluded semantic meaning, focusing instead on the probability of signal transmission. Shannon's framework operates powerfully within engineering contexts but cannot address the question of what transmitted signals mean to human perceivers: a question central to democratic governance, where the meaning citizens derive from public data determines their political behaviour. Bateson's (1972) relational definition – information as “a difference that makes a difference” – restored meaning but left unaddressed the question of what determines which differences matter for different perceivers. A rustling in the grass constitutes information for a predator but not for a geologist examining rock formations; the same economic indicators constitute different information for a fiscal conservative and a Keynesian economist, not because they apply different interpretations to shared data but because their frameworks render different patterns salient.

Floridi (2011) offered the most comprehensive recent philosophical integration, defining semantic information as well-formed, meaningful and truthful data. However, the truth requirement creates practical difficulties for governance: disinformation functions as information in democratic systems precisely because it is perceived as meaningful within particular frameworks. Citizens act on false beliefs – voting, protesting, withdrawing civic participation, supporting authoritarian measures – because those beliefs emerged as genuine information through their perceptual frameworks. A governance framework that defines false beliefs as “not information” cannot adequately theorise the mechanisms through which AI systems shape democratic behaviour.

The definition adopted here resolves these tensions by centring the perceiver. Information does not exist independently of perceivers; it emerges through the interaction between a perceiver and data within interpretive frameworks. The same data generates different information for different perceivers because they bring different frameworks to bear. It is not merely a matter of different *interpretations* of shared information. The interpretation model assumes that information exists prior to and independently of perceivers, who then apply different lenses to shared content. The framework developed here locates the phenomenon at a more fundamental level: different perceptual frameworks produce different perceptions, yielding genuinely different information from identical data.

For public administration, the distinction has concrete implications. If the problem is a biased interpretation of shared information, the governance response involves promoting media literacy and critical thinking: interventions targeting the interpretive process. If the problem is divergent information emergence from shared data – citizens literally perceiving different realities from the same evidence – these interventions are insufficient because they presuppose shared informational ground that does not exist. The governance response must address how perceptual frameworks are constructed in the first place. As the post-factual governance literature demonstrates, when the perceptual infrastructure itself is fragmented, interventions targeting content – fact-checking, source labelling, content removal – address symptoms while leaving the underlying structural condition unexamined (Alibašić, 2024; Alibašić & Rose, 2019).

2.2. Algorithmic shaping of perceptual infrastructure

Three principles follow from the definition, each with direct governance implications.

First, *perceptual frameworks reside in the perceiver*. Although physical and social contexts are commonly spoken of as external features, the interpretive frameworks enabling perception are features of the perceiving entity: cognitive architecture, training, experience and habitual patterns of attention. External circumstances, including algorithmically curated information environments, shape what frameworks develop over time, but the resulting perceptual capacities are internalised. A citizen whose information environment has been algorithmically curated for years does not simply receive biased content that can be corrected by exposure to alternative sources – that citizen has developed perceptual frameworks that determine what patterns appear salient, what connections seem meaningful, and what conclusions appear obvious even when encountering new, uncurated information. The internalisation is precisely what makes algorithmic framework construction so consequential for governance: the effects persist beyond the immediate algorithmic environment.

Second, *controlling framework construction controls information emergence*. Whoever shapes perceptual frameworks determines what information citizens derive from public data, without the visible coercion of censorship or the obvious distortion of propaganda. It is a form of power that operates below conscious awareness: citizens experience their perceptions as direct apprehensions of reality, unaware that their frameworks have been systematically shaped by algorithmic exposure patterns. The power is more subtle than propaganda because it does not require false content – it shapes the perceptual conditions under which true content is received and processed. Two citizens watching the same legislative debate perceive different information not because one has been deceived but because their frameworks render different elements salient.

Third, *algorithmic framework construction operates at unprecedented scale and precision*. While institutions, media organisations, educational systems and political parties have always shaped perceptual frameworks, AI systems construct them for billions of users simultaneously, personalised to individual behavioural profiles, optimised for commercial metrics that may diverge from democratic governance needs, and refined through

continuous feedback loops that accelerate framework development. The personalisation dimension is particularly significant: unlike broadcast media, which constructed relatively uniform frameworks for large audiences, algorithmic systems can construct millions of individualised frameworks, creating a fragmentation of perceptual infrastructure that has no historical precedent.

Zuboff (2019) identified the economic logic driving the process: surveillance capitalism operates through the extraction of behavioural surplus – data generated by user engagement – for prediction and behavioural modification. The framework developed here specifies the mechanism through which the modification operates: the perceptual frameworks within which certain behaviours become more probable are themselves constructed through algorithmic curation. The behavioural modification that surveillance capitalism pursues is not merely nudging within a fixed perceptual landscape; it reshapes the landscape itself. When platforms derive revenue from advertising markets that reward engagement, the economic incentives structurally favour framework construction that maximises emotional activation over epistemic accuracy – a misalignment with democratic governance needs that is not a design flaw but a feature of the underlying economic model.

Yeung (2018) similarly demonstrated that algorithmic regulation constitutes a distinct system of social ordering, operating through design-based techniques that embed value-laden decisions in computational architectures users cannot easily perceive or resist. Her taxonomy of algorithmic regulation – distinguishing reactive from pre-emptive systems, and classifying systems by their configuration across standard-setting, monitoring and behavioural-change functions – provides analytical infrastructure for understanding how platforms exercise regulatory power through perceptual framework construction. The shaping of perceptual infrastructure represents the deepest layer of the regulatory power: it operates not at the level of specific behavioural nudges but at the level of the perceptual conditions enabling all subsequent information processing.

2.3. Implications for democratic theory

Democratic governance theories from deliberative democracy (Habermas, 1996) to epistemic democracy (Landemore, 2013) presuppose that citizens can share sufficient common ground to engage in productive deliberation about collective problems. The presupposition is not merely normative, as it identifies an epistemic condition: citizens must be able to perceive sufficiently compatible information from shared data to enable meaningful collective decision-making.

Habermas's (1996) account of communicative rationality assumes interlocutors capable of engaging with shared validity claims: claims to truth, rightness and sincerity that can be redeemed through argumentative discourse. When algorithmic systems construct divergent perceptual frameworks, the shared validity claims presupposed by communicative rationality may not exist: citizens operating within different frameworks may not be making competing claims about shared phenomena but perceiving different phenomena entirely. Landemore's (2013) argument for the epistemic value of cognitive diversity – the claim that diverse groups make better collective decisions than

homogeneous expert bodies – similarly assumes diverse perspectives operating on shared informational terrain. Cognitive diversity is epistemically productive when diverse perceivers bring different analytical lenses to common data; it becomes epistemically destructive when perceivers inhabit frameworks so divergent that they cannot recognise the data others perceive.

Dryzek's (2000) discursive democracy tradition, which emphasises the role of competing discourses in shaping democratic outcomes, provides additional theoretical resources. He argues that democratic legitimacy depends on the contestation of discourses in the public sphere. However, discursive contestation presupposes that competing discourses address recognisably shared problems; a condition threatened when algorithmic systems construct frameworks in which different citizen groups perceive fundamentally different problem landscapes.

Three mechanisms through which algorithmic shaping of perceptual frameworks threatens democratic governance warrant particular attention.

First, *perceptual fragmentation*: when algorithmic systems construct divergent frameworks for different population segments, citizens may perceive such different information from shared data that productive dialogue becomes impossible. It is distinct from political polarisation as conventionally understood – the problem is not that citizens hold different opinions about shared facts but that they perceive different facts from identical data. The distinction matters for governance: polarisation of opinion can be addressed through deliberative mechanisms that bring opposing perspectives into dialogue, while perceptual fragmentation requires addressing the underlying framework divergence before dialogue can be productive.

Second, *engagement–truth misalignment*: platforms optimised for engagement construct perceptual frameworks where emotionally arousing content appears more informative than accurate but complex analysis. Levy's (2021) field experiment demonstrated that Facebook's algorithm substantially increased exposure to partisan news sources. On YouTube, by contrast, Hosseinmardi et al. (2021) found little evidence that the recommendation algorithm drives attention to radical content, with consumption concentrated among users who actively seek it – a reminder that the degrading mechanism operates through engagement optimisation and emotional salience rather than through demonstrated large-scale algorithmic steering. These studies provide evidence of mechanisms that systematically degrade the epistemic quality of democratic discourse by constructing frameworks in which emotional intensity functions as a proxy for informational importance.

Third, *adversarial exploitation*: state and non-state actors can deliberately construct incompatible perceptual frameworks to fragment democratic publics and prevent collective action (Alibašić, 2024; Alibašić, 2019). Effective adversarial campaigns exploit the primacy of framework construction: rather than directly introducing false claims, they first construct perceptual conditions ensuring targets will perceive desired information from partially true data. A campaign establishing systematic distrust toward democratic institutions creates perceptual conditions under which routine governance operations are perceived as evidence of conspiracy or authoritarian intent.

The empirical literature on aggregate effects presents a contested picture. Some studies find modest or limited effects of algorithmic curation, with consumption driven more by user choice than algorithmic steering (Bakshy et al., 2015; Dubois & Blank, 2018; Hosseinmardi et al., 2021; Guess et al., 2023). Others document significant impacts in specific contexts (Levy, 2021). The framework adopted here navigates the terrain by distinguishing the *mechanism* of framework construction from its *aggregate effects*. Even if current systems produce modest measurable polarisation at the population level, the demonstrated capacity for perceptual framework construction at scale creates structural risks to democratic governance that warrant proactive regulatory attention, consistent with precautionary approaches in regulatory governance (Yeung, 2018). The question for governance is not solely whether harm has been demonstrated at aggregate levels but whether the mechanism for producing harm at scale exists and remains ungoverned.

3. Taxonomy of algorithmically shaped frameworks

Understanding governance challenges requires distinguishing how different types of algorithmic framework construction operate and interact within democratic systems.

The taxonomy is organised along a single primary axis – the *intentionality and origin of framework construction* – running from frameworks that emerge as unintended byproducts of optimisation (curated) through deliberately engineered frameworks (adversarial) to frameworks arising within organisational AI deployment (institutional), with real-world frameworks typically combining these (hybrid/contested). Secondary dimensions – the actor responsible, the operative mechanism, the governing objective and the resulting risk type – are summarised in Table 1. The categories are treated as analytically distinct but empirically interacting; Section 3.2 addresses the curated–adversarial interaction as a structural feature rather than an exception.

Table 1
A taxonomy of algorithmically constructed perceptual frameworks

Framework type	Primary actor	Mechanism	Objective	Typical example	Dominant risk	Governance tool
Curated	Platforms	Engagement-optimised selection, sequencing, emphasis	Commercial (attention, ad revenue)	Social media feed; AI-synthesised search	Perceptual fragmentation; engagement–truth misalignment	Aggregate transparency; perceptual-sovereignty controls (Sections 5.1–5.2)

Framework type	Primary actor	Mechanism	Objective	Typical example	Dominant risk	Governance tool
Adversarial	State / non-state operators	Deliberate seeding of distrust-building frameworks; exploitation of partial truths	Political / strategic manipulation	Influence operation establishing institutional distrust	Self-reinforcing manipulation; collective-action paralysis	Prohibition of covert construction; circuit breakers; auditing (Section 5.3)
Institutional	Public organisations	Decision-support tools reshaping professional perception	Administrative efficiency / decision support	Recidivism risk scoring; welfare-eligibility tools	Institutional framework capture; displaced professional judgment	Framework impact assessments; hybrid intelligence design (Section 6.1)
Hybrid / contested	Multiple, interacting	Combination of the above across one perceiver	None unified; emergent	Contested zoning dispute; polarised public health response	Divergent factual perception; deliberative breakdown	Sequenced intervention: address framework divergence before deliberation (Sections 3.4, 6.3)

Source: Compiled by the author.

3.1. Curated frameworks

Recommendation systems, search engines, and social media feeds algorithmically construct curated frameworks through continuous exposure to selected content optimised for engagement, time on platform, or advertising revenue. These represent a historically novel phenomenon: the automated construction of perceptual frameworks at scale, personalised to individual behavioural profiles, and refined through continuous feedback loops.

Facebook’s news feed algorithm, serving approximately two billion users daily (Statista, 2024), exemplifies the process. The algorithm shapes not just individual content decisions but the overarching perceptual framework through which users encounter public affairs, operating through several interrelated mechanisms. *Source selection* builds familiarity and perceived credibility for frequently displayed sources, creating anchoring effects that shape how all subsequent information is processed. Over time, regularly encountered sources become default interpretive authorities – not because users have consciously chosen them but because algorithmic repetition has constructed familiarity frameworks. *Topic emphasis* makes certain policy issues appear more salient and important while rendering others perceptually invisible; citizens whose feeds emphasise immigration may perceive it as the defining issue of their era, while those whose feeds emphasise

economic indicators perceive a fundamentally different political landscape. *Narrative framing* juxtaposes content in ways that construct implicit causal narratives – consistently placing immigration stories alongside crime reports builds associative frameworks linking these topics without any individual item containing a false claim. *Emotional conditioning* prioritises emotionally arousing content over nuanced analysis, constructing frameworks where emotional intensity serves as a proxy for informational importance, gradually eroding the capacity to engage with complex policy analysis that lacks emotional activation.

For democratic governance, the critical issue is that traditional content moderation addresses individual posts while leaving the larger framework unexamined. A citizen might encounter no individual item qualifying as “misinformation” yet develop systematically distorted perceptions of public affairs because the algorithm has constructed a perceptual framework rendering certain patterns salient while making others invisible.

The shift toward AI-powered search with large language models intensifies these dynamics considerably. Traditional search engines presented multiple sources in ranked order, allowing users to compare perspectives and construct their own interpretive frameworks. AI-synthesised search responses consolidate multiple sources into unified answers – effectively constructing a single framework for the user. The AI determines which sources inform the synthesis (often opaque to users), chooses how to frame topics and which aspects to emphasise, and adopts particular perspectives while projecting neutrality and comprehensiveness. Citizens may perceive AI-synthesised responses as objective summaries when they reflect specific frameworks embedded in training data, ranking algorithms and synthesis processes. The governance challenge is acute: as AI-powered search displaces traditional search for an increasing share of information seeking, the capacity for individualised framework construction through independent source evaluation diminishes.

3.2. Adversarial frameworks

Adversarial frameworks are deliberately constructed to manipulate perception for political, commercial, or strategic objectives. Unlike curated frameworks arising as side effects of engagement optimisation, adversarial frameworks are intentionally designed to produce specific perceptual outcomes in target populations.

The sophistication of contemporary adversarial operations lies in their targeting of perceptual infrastructure rather than individual beliefs. Rather than directly introducing false claims – which can be fact-checked and debunked – effective campaigns first construct frameworks ensuring targets will perceive desired information from partially true data (Alibašić, 2024). A campaign establishing systematic distrust toward mainstream media, scientific institutions, and democratic processes creates perceptual conditions under which routine government operations are perceived as evidence of conspiracy, ordinary journalistic practices are perceived as coordinated manipulation, and public health measures are perceived as authoritarian control mechanisms. Critically, once these frameworks are established, they are self-reinforcing: information that would challenge

the framework is perceived through it, and thus appears as further confirmation rather than disconfirmation.

The intersection of adversarial framework construction with algorithmic curation creates compound threats. When adversarial actors seed content designed to construct particular frameworks, algorithmic systems optimised for engagement may amplify the content – not through any deliberate collaboration but because content designed to provoke strong emotional responses performs well within engagement-optimised systems. The adversarial operator constructs the initial framework; the platform's algorithm reinforces and extends it through its normal operations. It creates a governance challenge that neither content moderation (addressing individual items) nor algorithmic transparency (explaining individual recommendations) can adequately address.

The curated and adversarial categories are analytically separable by intent but structurally coupled in operation. Adversarial construction does not bypass curated systems; it parasitises them. An operator engineers content to satisfy the engagement signals that curated systems reward, so that the platform's commercial optimisation completes the adversarial design without any deliberate collaboration (cf. Yeung, 2018, on design-based ordering). In Table 1, these appear as distinct rows because their governance tools differ – transparency and user control for curated construction, prohibition and detection for adversarial – but a complete governance response must address their coupling, since tools aimed at one without the other leave the compound pathway open.

3.3. Institutional frameworks

Public sector organisations increasingly deploy AI systems for decision support in healthcare, criminal justice, welfare administration and regulatory enforcement. These systems interact with and potentially reshape existing institutional perceptual frameworks in ways that carry significant governance implications.

When judges repeatedly use recidivism risk assessment algorithms, they may gradually internalise the frameworks these tools construct – perceiving certain demographic or behavioural factors as more predictive of recidivism than warranted by evidence. Medical diagnosis support systems trained primarily on data from one demographic group construct frameworks where symptoms in that group appear more salient and clinically meaningful, potentially reshaping how physicians perceive patients from underrepresented populations. Welfare eligibility algorithms construct frameworks determining what factors appear relevant to need assessment, potentially displacing the nuanced professional judgment that experienced caseworkers bring to complex human situations.

The governance challenge extends beyond individual decision accuracy: AI systems can fundamentally alter the institutional frameworks through which public servants perceive their work, constituting what Yeung (2018) classifies as pre-emptive algorithmic regulation operating within organisational structures. Over time, the organic professional judgment built through years of training and practice may be displaced by algorithmically constructed frameworks that embed particular assumptions about what patterns matter

and what factors predict outcomes. When the displacement occurs gradually and unconsciously – when professionals do not recognise that their perceptual frameworks have shifted – the result is institutional framework capture: the organisation’s perceptual infrastructure has been reshaped by the AI system without deliberate institutional choice.

3.4. Hybrid and contested frameworks

Real-world perceptual frameworks rarely fit neatly into single categories. A citizen’s framework for perceiving public affairs combines organic elements developed through education and lived experience, curated elements constructed through algorithmic personalisation, institutional elements shaped by professional training and organisational norms, and technological elements determined by interface design and medium affordances. The interaction among these elements creates hybrid frameworks with complex governance characteristics.

Democratic deliberation characteristically occurs across contested hybrid frameworks, where different citizen groups may perceive fundamentally different information from shared data. When a municipal government proposes a zoning change, residents whose frameworks have been shaped by different algorithmic environments may perceive the proposal through incompatible lenses – one group perceiving community development opportunity, another perceiving displacement threat, another perceiving corruption. These are not merely different values brought to shared facts; they may be different factual perceptions arising from divergent frameworks.

Contested frameworks present acute governance challenges because the mechanisms designed for managing value disagreement – compromise, negotiation, deliberative forums, democratic voting – presuppose that participants perceive a shared factual landscape, even if they evaluate it differently. When the frameworks are so divergent that participants perceive different factual landscapes, these mechanisms lose their epistemic grounding. Governance in conditions of contested frameworks requires first addressing the perceptual divergence before conventional deliberative mechanisms can function effectively.

4. Regulatory gap analysis: The EU AI Act and perceptual infrastructure

The EU AI Act represents the most comprehensive regulatory framework for AI governance, establishing risk-based classification from unacceptable through high-risk to limited and minimal risk (AI Act, Recital 26–27). However, the Act’s treatment of perceptual infrastructure reveals significant governance gaps that warrant systematic analysis.

4.1. Classification limitations

The Act classifies AI systems used for recommendation and algorithmic curation as limited-risk or minimal-risk applications, subject primarily to transparency obligations rather than the more rigorous requirements applied to high-risk systems in domains such as healthcare, criminal justice and employment. The classification reflects a focus on the risk posed by individual system interactions rather than the cumulative, long-duration effects of algorithmic framework construction.

Yadav (2025) observes that the temporal dynamics of algorithmic influence may extend beyond the Act's assessment frameworks – a concern, which the analysis substantiates. The construction of perceptual frameworks operates through years of micro-exposures that individually appear innocuous but cumulatively reshape the infrastructure through which citizens perceive democratic governance. The Act's static risk classification, which assesses systems at specific points in time, does not capture the dynamic, cumulative process. A recommendation system that scores as low-risk in any given interaction may, over years of sustained operation, fundamentally reshape the perceptual infrastructure of millions of citizens. The risk is not located in any individual algorithmic decision but in the aggregate pattern of decisions sustained over time – a temporal dimension that the Act's classification framework is not designed to capture.

4.2. Transparency deficits

The Act mandates transparency for general purpose AI models and imposes disclosure obligations on providers and deployers. However, transparency about perceptual framework construction requires fundamentally different mechanisms than transparency about individual outputs. Citizens need not merely to understand why a particular recommendation was made but to perceive how their informational environment has been systematically shaped over time – the aggregate patterns, source distributions, topic emphases, and narrative framings that constitute their perceptual infrastructure.

The Act's transparency provisions, oriented toward individual decisions and system-level documentation, do not require the longitudinal, aggregate disclosure. A platform could provide full transparency about why each individual piece of content was recommended – satisfying the Act's requirements – while the cumulative pattern of those recommendations constructs a perceptual framework that is never disclosed to the user and remains invisible to regulators.

4.3. The content-infrastructure gap in the EU regulatory architecture

The AI Act's provisions, complemented by the DSA's algorithmic transparency and risk assessment requirements for VLOPs, address content moderation and individual recommendation decisions. The DSA requires platforms to assess and mitigate systemic risks,

including risks to civic discourse and electoral processes. However, neither instrument addresses the construction of perceptual infrastructure as a distinct governance domain.

A platform could comply fully with both the AI Act and the DSA – moderating prohibited content, providing transparency about individual algorithmic decisions, conducting required systemic risk assessments – while systematically constructing divergent perceptual frameworks that undermine the epistemic foundations of democratic deliberation. The systemic risk assessments required by the DSA focus on identifiable harms (disinformation, electoral manipulation, negative effects on minors) rather than on the gradual construction of perceptual frameworks that may not produce identifiable harms at any single point in time but cumulatively reshape the democratic public's capacity for shared perception.

The gap reflects a broader conceptual limitation in contemporary AI governance: the predominant focus on outputs (what systems recommend, decide, or generate) rather than on the upstream construction of the perceptual frameworks that determine how outputs are received and processed. The EU AI Act's prohibition on AI systems that deploy subliminal techniques or exploit vulnerabilities to materially distort behaviour provides a starting point, but these provisions target discrete manipulative acts rather than the gradual, cumulative construction of perceptual frameworks through sustained algorithmic curation.

4.4. Omission or implementation deficit?

A natural objection is that perceptual-infrastructure harms might already be reachable under existing provisions, making the problem one of *implementation* rather than *omission*. The distinction matters for governance: an implementation deficit calls for enforcement resources and guidance, whereas an omission calls for new regulatory categories. The analysis here indicates the gap is *primarily* one of omission, with a *secondary* implementation dimension.

The case for omission rests on the object of regulation. The EU AI Act's risk classification (Article 6 and Annex III) attaches to *systems* and *use cases* assessed at defined points, and the DSA's systemic-risk regime (Articles 34–35) attaches to *identifiable* systemic risks – disinformation, electoral integrity, effects on minors, fundamental rights. Neither instrument contains a provision whose object is the cumulative, longitudinal construction of perceptual frameworks. The prohibition on subliminal and manipulative techniques in the AI Act reaches *discrete* manipulative acts that *materially distort behaviour*; it does not reach the gradual, individually innocuous micro-exposures whose harm is constituted only in aggregate over time (Yadav, 2025). The harm identified here is thus excluded not because regulators have failed to apply an existing rule but because no provision takes the relevant object – aggregate framework construction – as its subject. That is omission.

The secondary implementation dimension is real but narrower. Where the DSA's systemic-risk assessments *could*, in principle, capture framework effects – civic discourse risk under Article 34 is drafted broadly enough to admit a generous reading – the limiting factor is that the assessments target point-in-time identifiable harms and lack the

longitudinal, aggregate methodology that framework construction requires. Here, the deficit is partly implementational (the methodology does not yet exist) and partly definitional (the regulation does not require it). The governance implication is correspondingly two-part: extend the regulatory object to recognise perceptual infrastructure as a distinct domain (addressing the omission), and develop the longitudinal audit methodologies that would let existing systemic-risk mandates reach framework effects (addressing the deficit). Both are developed in Sections 5–6.

5. An accountability framework for perceptual infrastructure

Governing the algorithmic construction of perceptual frameworks requires mechanisms distinct from – though complementary to – existing content moderation and algorithmic transparency approaches.

5.1. Aggregate transparency

Traditional algorithmic transparency focuses on explaining individual decisions – why a particular recommendation was made or a specific piece of content surfaced. Governing perceptual infrastructure requires *aggregate transparency*: disclosure mechanisms showing how algorithmic systems construct perceptual frameworks over time.

Platforms should be required to provide users with longitudinal dashboards showing the distribution of sources they have been exposed to, topic emphasis patterns in their information environment, diversity metrics indicating framework homogeneity or heterogeneity, and historical changes in their informational landscape. These dashboards should enable citizens to perceive the aggregate patterns that constitute their perceptual frameworks – making visible what is by design invisible in current platform architectures. Platforms should also publicly disclose high-level principles governing framework construction: what metrics drive construction decisions, how personalisation algorithms balance individual preferences against exposure to diverse perspectives, and what values are embedded in construction processes.

Critically, transparency must be *meaningful* – accessible and actionable for citizens without technical expertise. It requires coupling disclosure with effective visualisation tools, plain language explanations, comparative views showing how individual frameworks differ from population-level patterns, and mechanisms allowing users to modify how their frameworks are being constructed. Transparency that is technically accurate but practically inaccessible fails the democratic purpose it is intended to serve.

5.2. Perceptual sovereignty as a citizen right

This paper proposes *perceptual sovereignty* – the principle that citizens have legitimate interests in controlling how their own perceptual frameworks develop. It does not mean

isolation from all external influence – human beings inevitably develop perceptual frameworks through social interaction, education and institutional participation – but establishes a presumption against covert, systematic, algorithmically driven manipulation of frameworks optimised for commercial rather than democratic ends.

Perceptual sovereignty requires several concrete mechanisms: opt-out options allowing citizens to receive chronological content without algorithmic curation; meaningful control over the principles governing framework construction, including source diversity requirements and the ability to set parameters for algorithmic exposure; periodic “reset” options preventing extreme framework homogenisation; access to multiple curated environments constructed according to different principles, enabling citizens to compare how different frameworks shape their perception; and enhanced protections for information environments directly relevant to democratic participation, including electoral periods and policy deliberation. Special protections are warranted for vulnerable populations, including minors and those with cognitive impairments, whose capacity to recognise and resist framework manipulation may be limited.

5.3. Proportional responsibility

Accountability for the algorithmic construction of perceptual frameworks should be proportionally distributed among stakeholders based on their capacity to shape outcomes and the magnitude of their influence.

Platform responsibilities: Platforms constructing frameworks at scale bear primary responsibility for aggregate transparency, meaningful user control, prevention of extreme framework homogenisation, protection against adversarial framework construction, regular third-party auditing of framework construction effects, and investment in research on the democratic implications of their systems. Platforms should also be required to implement automated “framework circuit breakers” – mechanisms that detect when a user’s framework has become highly homogeneous and trigger deliberate exposure to diverse perspectives.

Public institutional responsibilities: Government organisations deploying AI decision support bear responsibility for understanding and monitoring how systems reshape institutional frameworks, maintaining organic professional judgment alongside AI-constructed frameworks through training and institutional design, ensuring that AI-constructed institutional frameworks align with democratic values and legal requirements, and conducting framework impact assessments before deploying new AI systems.

Regulatory responsibilities: Governments and regulatory bodies should establish aggregate transparency requirements extending beyond individual decisions to longitudinal framework effects, mandate meaningful user control mechanisms, prohibit covert adversarial framework construction, commission independent auditing of framework construction at scale, develop standards for framework construction in domains directly relevant to democratic governance, and invest in research on democratic implications. The EU AI Office provides an institutional model that should be extended to encompass perceptual infrastructure as a distinct governance domain.

User responsibilities: User responsibility should be understood as limited by the frameworks citizens inhabit. Holding individuals fully responsible for perceptions shaped by years of algorithmic curation is both normatively inappropriate and empirically unsupported. Users bear responsibility for engaging with transparency mechanisms where available and developing awareness of their own perceptual frameworks, but the responsibility is secondary to the obligations of those who construct the frameworks at scale.

5.4. Meta-perceptual literacy

Effective governance of perceptual infrastructure requires citizens capable of recognising that they perceive through frameworks susceptible to algorithmic construction. Traditional digital literacy emphasises evaluating individual sources and claims – a necessary but insufficient skill set. What may be termed *meta-perceptual literacy* extends it to evaluating the frameworks through which one perceives information: recognising how sustained algorithmic exposure patterns shape perception over time, identifying how systems construct frameworks through content selection, sequencing and presentation, deliberately adopting different frameworks to understand how other citizens perceive shared data, and recognising markers of adversarial framework manipulation.

The EU AI Act's literacy provisions, mandating Member States to promote AI literacy, provide a regulatory foundation for such initiatives. However, technical AI literacy – understanding how algorithms function at a mechanical level – is insufficient without the meta-perceptual dimension: understanding how sustained algorithmic exposure shapes one's own perceptual capabilities and recognising the gap between perceiving one's framework as natural or self-evident and recognising it as partially constructed. Educational curricula should include practical exercises in framework shifting – deliberately encountering information through alternative frameworks to develop awareness of one's own perceptual assumptions and the contingency of one's habitual perception patterns.

6. Implications for public administration

6.1. Public sector decision-making and institutional frameworks

As public organisations deploy AI decision support systems across healthcare, welfare, criminal justice and regulatory enforcement, they must attend to how these systems reshape institutional perceptual frameworks. *Framework impact assessments* are recommended – systematic evaluations conducted prior to AI deployment examining what frameworks the system is likely to construct among organisational users, whether these frameworks align with institutional values and democratic commitments, what training is needed for staff to maintain critical distance from AI-constructed

frameworks, and how the interaction between AI-constructed and organic professional frameworks will be managed over time.

Hybrid intelligence approaches – preserving space for professional judgment informed by organic institutional frameworks alongside AI-constructed frameworks – can prevent the wholesale displacement of professional perceptual competence. Organisations should maintain practices that exercise and develop organic professional judgment even as they integrate AI decision support, ensuring that algorithmic frameworks complement rather than replace human expertise. It requires deliberate institutional design: regular case reviews conducted without AI support, professional development activities that strengthen organic perceptual capacities, and rotation between AI-assisted and non-assisted work environments.

Concretely, public organisations should 1. require a *framework impact assessment* – modelled on data-protection impact assessments – as a precondition for procuring any AI decision-support system; 2. mandate periodic *AI-free case reviews* in which professionals exercise unassisted judgment on a sampled caseload, generating a baseline against which to detect framework drift; and 3. assign explicit organisational ownership of framework monitoring, rather than leaving it diffused across IT and compliance functions.

6.2. Regulatory capacity and institutional design

Governing the algorithmic construction of perceptual frameworks demands regulatory capacities that few public administrations currently possess. Regulators need analytical tools capable of auditing framework construction effects at scale, multidisciplinary expertise bridging computational systems, cognitive science and democratic theory, institutional structures enabling continuous monitoring rather than one-time compliance assessment, and the ability to assess cumulative effects of algorithmic exposure over time rather than evaluating individual system interactions in isolation.

The EU AI Office and the broader governance architecture established by the AI Act provide institutional models. However, governing perceptual infrastructure requires extending these models beyond their current mandates, developing new audit methodologies appropriate to long-duration framework construction rather than point-in-time system evaluation, and building regulatory capacity that can keep pace with rapidly evolving AI capabilities. National regulatory authorities will need to develop competencies that currently exist in fragmented form across data protection agencies, media regulators and competition authorities – suggesting the need for institutional coordination mechanisms or dedicated regulatory bodies with cross-cutting mandates.

6.3. Democratic resilience and perceptual common ground

Public administration scholarship has increasingly recognised resilience as a governance imperative – the capacity of public systems to absorb shocks, adapt to disruptions, and maintain core functions during periods of stress (Alibašić, 2024). Algorithmic reshaping

of perceptual infrastructure represents a novel and underexamined threat to democratic resilience.

Democratic systems depend upon citizens sharing sufficient perceptual common ground to engage in collective sense-making during periods of stress. When algorithmic systems fragment the common ground – constructing divergent frameworks through which different population segments perceive fundamentally different information from shared evidence – democratic systems lose adaptive capacity precisely when they most need it. A public health emergency requires citizens who can perceive shared evidence about disease transmission and treatment efficacy; an economic transition requires citizens who can recognise common challenges and evaluate proposed responses; a security threat requires citizens who can identify shared risks and support collective action. When perceptual infrastructure is fragmented, each of these collective capacities is compromised, and the democratic system's ability to mount coherent responses to crises deteriorates.

It has particular relevance for governance in contexts of democratic fragility, including the Central and Eastern European democracies that have experienced both rapid digitalisation and democratic stress. In these settings, the algorithmic construction of divergent perceptual frameworks intersects with existing social cleavages, institutional fragilities, historical mistrust of public institutions, and foreign influence operations. Societies where democratic institutions are still consolidating and where historical experience has generated justified scepticism toward state authority are particularly vulnerable to framework construction that systematically amplifies institutional distrust. The compound effect – algorithmic framework construction operating on populations with pre-existing institutional scepticism, in media environments with limited independent journalism capacity, and under conditions of active foreign influence operations – creates threats to democratic resilience that neither content moderation nor conventional media regulation can adequately address.

7. Limitations and future directions

Several limitations warrant acknowledgment. First, the framework developed here is primarily theoretical; empirical validation through longitudinal studies tracking framework development, experimental research on framework manipulation resistance, and field studies of governance interventions remains essential. The measurement of perceptual frameworks presents particular methodological challenges: most existing research relies on behavioural proxies (what content users engage with) or self-reports (what users say they perceive), neither of which directly captures the perceptual frameworks themselves. Developing more direct measurement methods constitutes a research priority.

Second, most existing research on algorithmic framework construction focuses on Western, English-speaking democracies with robust independent media ecosystems. How these dynamics operate across diverse political systems, languages, media environments and cultural contexts – including the Central and Eastern European contexts – requires

substantially more investigation. Governance mechanisms effective in one political and media environment may require significant adaptation for others.

Third, AI technologies continue evolving rapidly, with large language models, virtual and augmented reality, and multimodal AI systems raising new questions about framework construction that current analysis cannot fully anticipate. The emergence of AI systems capable of generating personalised audio, video and interactive content creates framework construction capabilities qualitatively different from text-based recommendation systems. Governance frameworks must remain adaptable as these capabilities emerge.

Future research should prioritise the development of measurement methods for perceptual frameworks and their algorithmic construction; cross-jurisdictional comparative analysis of regulatory approaches to algorithmic influence on democratic perception; investigation of how framework construction interacts with existing democratic institutions across different governance traditions; empirical assessment of intervention effectiveness including aggregate transparency mechanisms, perceptual sovereignty tools, framework circuit breakers and meta-perceptual literacy programs; and examination of how compound threats – algorithmic framework construction intersecting with foreign influence operations and democratic fragility – manifest in specific national contexts.

8. Conclusion

The argument moved from a conceptual account of information as perception given a framework (Section 2), through a taxonomy distinguishing curated, adversarial, institutional and hybrid construction (Section 3), to a provision-level demonstration that the EU architecture omits perceptual infrastructure as a regulatory object (Section 4); the accountability framework (Section 5) and administrative implications (Section 6) follow from that identified gap rather than standing as independent proposals.

The paper has argued that the algorithmic construction of perceptual frameworks constitutes a fundamental and inadequately governed challenge for democratic governance – a challenge that defines the post-factual governance environment in which public administration now operates. AI systems exercise power not merely through content selection but by reshaping the perceptual infrastructure through which citizens encounter public affairs – a mechanism operating below the threshold of conventional content moderation and existing regulatory instruments, including the EU AI Act and the Digital Services Act.

The theoretical framework grounded in the principle that information emerges through the interaction of perception and interpretive frameworks reveals why conventional responses – content moderation, individual algorithmic transparency, media literacy – are necessary but insufficient. These interventions address symptoms while leaving the underlying infrastructure unexamined. When the perceptual infrastructure of democracy is fragmented, fact-checking individual claims cannot restore shared perception, and transparency about individual recommendations cannot make visible the aggregate patterns that constitute citizens' perceptual frameworks.

The accountability framework proposed here – incorporating aggregate transparency, perceptual sovereignty as a citizen right, proportional responsibility and meta-perceptual literacy – provides a foundation for governing the challenge. However, implementing these principles requires extending existing regulatory instruments to recognise perceptual infrastructure as a distinct governance domain warranting dedicated institutional attention, regulatory capacity and enforcement mechanisms.

The stakes are fundamental. When algorithmic systems construct the frameworks through which citizens perceive democratic governance, they exercise a form of power that threatens the epistemic foundations of collective self-governance. Public administration scholarship must engage the challenge directly – developing both the theoretical understanding and practical governance mechanisms needed to preserve democratic capacity in the age of algorithmically mediated post-factual reality.

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