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Digital Constitutionalism and the Protection of Customary Law People's Rights in Indonesia

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ABSTRACT

Digital revolution has altered the manner in which public authority is administered and how citizens engage with public services, partake in democratic activities, and assert their constitutional rights. This research examines the effects of digital transformation on the constitutional rights of customary law communities and delineates Indigenous Data Sovereignty within the Indonesian legal system. Contemporary studies on digital constitutionalism mostly emphasise individual rights, state power, and the governance of digital platforms, but Indigenous Data Sovereignty discourse specifically underscores collective management of Indigenous data. However, the relationship between these two fields remains insufficiently developed in Indonesia, particularly with communal data, indigenous wisdom, and cultural identity. This research employs a normative legal approach utilising statutory and conceptual frameworks. Primary and secondary legal texts were collected through library research and analysed qualitatively. The findings suggest that digital transformation improves cultural preservation, information availability, civic participation, and public service provision. Concurrently, it fosters unequal digital accessibility, administrative exclusion, diminishment of community control over collective data, and the unauthorised utilisation of indigenous knowledge without authorisation or fair benefit-sharing. Indonesia's personal data protection framework primarily emphasises identifiable individuals and is deficient in explicit restrictions concerning communal data or collective detriment. This research contends that Indigenous Data Sovereignty should be founded on recognising communal data and customary law communities as collective rights-holders, employing consent based on traditional practices, guaranteeing community governance over data access and use, instituting benefit-sharing, performing collective impact assessments, ensuring institutional oversight, and delivering effective remedies.

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1. Introduction

Digital revolution has altered the manner in which public authority is administered and how citizens engage with public services, partake in democratic activities, and assert their constitutional rights. These endeavours are progressively conducted via digital frameworks managed by both governmental entities and commercial tech firms, thus establishing novel power dynamics that could influence information accessibility, privacy, freedom of speech, equality, and civic engagement.[1] Thus, the primary constitutional enquiry has shifted from simply determining the applicability of recognised rights in cyberspace to examining how constitutional rights and constraints on both public and private authority may be assured in a progressively data-centric landscape.[2] This predicament establishes the framework for the rise of digital constitutionalism.[3]

This gave rise to the idea of digital constitutionalism which is an attempt to adapt ideals, rights and constraints on authority derived from the constitution into the digital realm. Digital technology is not just a method of communication, but constitutes an infrastructure where freedom, power and relationship between the state, business and citizens are exercised. Digital constitutionalism consequently is not only concerned with the protection of individual rights on the internet, but also requires that the process of collection, control, processing and utilization of data be subject to the principles of justice, accountability and respect for constitutional rights.[4]

In the Indonesian context, the 1945 Constitution of the Republic of Indonesia as the country's constitution has explicitly provided guarantees for various basic rights. Some of the relevant articles include Article 28F which states that everyone has the right to communicate and obtain information to develop their personal and social environment, as well as the right to seek, obtain, possess, store, process, and convey information using all available channels.[5] In addition, Article 28E paragraph (3) states that everyone has the right to freedom of association, assembly, and opinion. Article 28D paragraph (1) affirms that everyone has the right to fair legal recognition, guarantee, protection, and certainty as well as equal treatment before the law.[6] Furthermore, Article 31 requires the state to guarantee the right to education for all citizens.[7] All of these provisions can actually be expanded in terms of digital context, where the fulfillment of these rights now depends heavily on digital infrastructure and access.

The constitutional protections in the context of digital transformation reach beyond individual entitlements to include the communal rights of customary law groups. The 1945 Constitution of the Republic of Indonesia, under Article 18B subsection (2), recognises and values customary law groups together with their traditional rights, while Article 28I subsection (3) defends the cultural identities and rights of traditional communities. Section (1) of Article 32 stipulates that the state must honour the rights of communities to safeguard and enhance their cultural traditions. These regulations offer a constitutional framework for the

[1] De Gregorio, "The Rise of Digital Constitutionalism in the European Union."
[2] Suzor, "Digital Constitutionalism: Using the Rule of Law to Evaluate the Legitimacy of Governance by Platforms."
[3] Celeste, "Digital Constitutionalism: A New Systematic Theorisation."
[4] Fernando, Wali, and Hafizah, "Konstitusionalisme Digital Di Indonesia: Pembatasan Kekuasaan Negara Dan Platform Dalam Perlindungan Hak Konstitusional Warga Di Ruang Siber."
[5] Rahman et al., "Harmonization of Digital Laws and Adaptation Strategies in Indonesia Focusing on E-Commerce and Digital Transactions."
[6] Abqa et al., *Hukum Tata Negara: Sebuah Konsep Dasar Dalam Menata Bangsa*.
[7] Pujayanti et al., "Indonesia's Constitutional Court: Bastion of Law Enforcement and Protector of Human Rights in the Reform Era."

protection of customary law communities when their identities, knowledge, cultural expressions, territories, and social relationships are reflected or handled in digital settings.

Nonetheless, a disparity persists between these fundamental assurances and the circumstances under which digital rights are implemented. Statistics Indonesia indicated that 72.78 percent of Indonesia's populace utilised the internet in 2024, suggesting that a significant segment of the population still lacked adequate internet connection. Disparate access may hinder the realisation of rights that increasingly rely on digital infrastructure, encompassing access to information, public services, education, and involvement in decision-making. For communities governed by customary law, especially in isolated regions, this inequality holds constitutional importance as digital marginalisation could exacerbate their restricted visibility and involvement in governmental frameworks.[8]

Digital transition carries specific ramifications for traditional law communities, since disparities in access may hinder their capacity to acquire information, engage in policymaking, use public services, and affirm their cultural identities and rights. The digitisation of public administration may marginalise populations who lack formal acknowledgement or fail to meet digital administrative criteria, rendering the digital divide an issue of not just connectivity but also legal recognition, engagement, and access to advancement.[9] Simultaneously, information on customary lands, natural assets, linguistic heritage, ancestry, traditional healing practices, rituals, sacred locations, cultural manifestations, and ecological wisdom can be communally possessed and passed down through generations. The acquisition and utilisation of such data by governments, researchers, technology firms, or artificial intelligence creators without community engagement may jeopardise communal authority over traditional knowledge and cultural identity, illustrating that collective data cannot be sufficiently safeguarded through a solely individualistic method of data protection.[10]

Law Number 27 of 2022 regarding Personal Data Protection delineates personal data as pertaining to an identified or identifiable natural person, hence establishing safeguards for the individual data subject. While this framework is crucial for personal privacy, it fails to explicitly acknowledge communal data, customary law communities as collective data subjects, collective consent, benefit-sharing, or remedies for community harm. Law Number 5 of 2017 concerning Cultural Advancement acknowledges traditional knowledge and cultural practices as subjects of cultural enhancement, although it fails to govern community control over their digitisation, processing, or repurposing.I'm sorry, but it seems that the text you provided is not sufficient for me to create paraphrases. Could you please provide more content? This exclusion is becoming more critical as digitisation facilitates documentation and preservation, while also allowing for the replication, commercialisation, or utilisation of traditional knowledge and cultural expressions as artificial intelligence training data without the consent of the community or equitable benefits.

Global advancements establish a foundation for tackling this normative deficiency. Article 31 of the United Nations Declaration on the Rights of Indigenous Peoples affirms the entitlement of Indigenous Peoples to preserve, govern, safeguard, and enhance their cultural heritage, traditional knowledge, and cultural expressions, a tenet further elaborated by

[8] Badan Pusat Statistik Indonesia, "Telecommunication Statistics in Indonesia 2024."

[9] Novemyanto, Nur, and Octavia, "Keadilan Digital Dalam Bingkai Pluralisme Hukum: Perlindungan Identitas Hukum Masyarakat Adat Di Era Kependudukan Digital."

[10] Pradhani, "Pendekatan Pluralisme Hukum Dalam Studi Hukum Adat: Interaksi Hukum Adat Dengan Hukum Nasional Dan Internasional."

Indigenous Data Sovereignty.The CARE Principles implement this authority via communal advantage, governance, accountability, and moral standards.The 2024 WIPO Treaty on Intellectual Property mandates that patent applicants reveal the origin or source of genetic resources and related traditional knowledge under certain conditions. Nonetheless, Indonesia's legal structure is disjointed: the Constitution acknowledges customary law communities and their cultural identities, the Personal Data Protection Law safeguards individual data subjects, and the Advancement of Culture Law acknowledges traditional knowledge, yet none offers a cohesive framework for communal data governance. The ensuing normative deficiency pertains to the lack of collective legal recognition, community permission, oversight of data utilisation, equitable benefit distribution, and recourse for damages stemming from the digital exploitation of communal knowledge and cultural identity.

Contemporary scholarly discussions regarding digital constitutionalism predominantly contextualise constitutional protections for individual rights, platform governance, privacy, freedom of expression, and limitations on both public and private digital power. Indigenous Data Sovereignty research has concurrently developed frameworks for collective power, self-determination, and the stewardship of Indigenous data. However, the normative relationship between these two domains of enquiry is insufficiently developed, particularly regarding how digital constitutionalism can recognise collective Indigenous rights related to communal data, traditional knowledge, and cultural identity within the Indonesian legal system.

This study investigates the impact of digital transformation on the constitutional rights of customary law communities and formulates a digital constitutionalism framework to safeguard their communal data, traditional knowledge, and cultural identity. Issue Definition: What is the impact of digital change on safeguarding the constitutional rights of customary law communities in Indonesia? (1) In what manner should digital constitutionalism be formulated to safeguard the communal data, traditional knowledge, and cultural identity of customary law communities in Indonesia?

2. Method and Legal Material

This research utilises doctrinal legal analysis through statutory and conceptual methodologies. Doctrinal research serves to discern, elucidate, and organise legal norms, concepts, and doctrines pertinent to safeguarding customary law communities within the digital realm.[11] The choice and examination of legal resources are directed by two enquiries: firstly, in what manner digital transformation influences the safeguarding of constitutional rights for customary law communities in Indonesia; and secondly, how digital constitutionalism ought to be formulated to preserve their communal data, traditional knowledge, and cultural identity. The legal framework scrutinises the 1945 Constitution of the Republic of Indonesia, Law Number 27 of 2022 regarding Personal Data Protection, Law Number 5 of 2017 pertaining to Cultural Advancement, the Law on Electronic Information and Transactions along with its revisions, and statutes related to electronic systems and customary law communities. The theoretical framework explores digital constitutionalism, collective rights, communal data, traditional knowledge, cultural identity, and Indigenous Data Sovereignty.

The legal resources consist of both primary and secondary texts. Primary legal documents encompass Indonesian laws and global agreements, notably the United Nations Declaration

[11] Majeed, Hilal, and Khan, "Doctrinal Research in Law: Meaning, Scope and Methodology."

on the Rights of Indigenous Peoples and the WIPO Treaty concerning Intellectual Property, Genetic Resources, and Associated Traditional Knowledge. Indonesian laws were obtained via the official Legal Documentation and Information Network, the legislative database of the Audit Board of the Republic of Indonesia, and authorised government websites. International instruments were acquired from the official databases of the United Nations and the World Intellectual Property Organisation. Secondary sources, such as books and peer-reviewed journal articles, were located via Scopus, HeinOnline, Google Scholar, and pertinent journal databases by employing combinations of the phrases "digital constitutionalism," "Indigenous Data Sovereignty," "communal data," "traditional knowledge," "customary law communities," and "collective rights." Official statistical reports served solely to provide context for digital access and were not regarded as core legal documents.

The contents underwent qualitative analysis using grammatical, systematic, and teleological interpretation.[12] Grammatical analysis was employed to ascertain the textual significance of essential statutory terminology, such as "personal data," "data subject," "customary law communities," and "traditional knowledge." A methodical analysis was conducted to investigate the correlation between the constitutional acknowledgement of customary law communities, personal data safeguarding, cultural preservation, electronic governance systems, and pertinent international benchmarks. Teleological analysis was employed to evaluate if these standards achieve their objectives of safeguarding constitutional rights, cultural identity, and communal governance over traditional knowledge in digital contexts.[13] The findings were articulated in both descriptive and prescriptive manners: the descriptive analysis delineates the current legal structure and its normative deficiencies, whereas the prescriptive analysis devises a framework for digital constitutionalism aimed at safeguarding communal data, traditional knowledge, and the cultural identity of customary law communities.

3. Results and Discussion

3.1 Digital Transformation and Protection of Constitutional Rights of Indigenous Peoples in Indonesian

The constitution is the supreme basic law in a country that functions not only as a formal legal instrument, but also as a means of control over power as well as a guarantee for the exercise of citizens' constitutional rights.[14] In Hans Kelsen's perspective, the constitution occupies a position as a fundamental norm (grundnorm) in the national legal order.[15] The constitution regulates the relationship between citizens and the state, and determines the limits on the use of power so as not to deviate from the principles of the rule of law.[16] The constitution has a strategic role in ensuring that every citizen receives equal legal protection, including protection of freedom, education, information, privacy, cultural identity, and participation in public life.

The digital age is a stage of development of modern society, characterized by the extensive use of information and communication technologies in various spheres of life. This trend is a reflection of the change from industrial society to information society, when data, algorithms, networks and digital gadgets become the key means of changing social, economic

[12] Lemaitre and MacCormick, *Law and Legal Interpretation*.
[13] Barak, *Purposive Interpretation in Law: Chapter One, What Is Legal Interpretation?*
[14] Asshiddiqie, *Teori Dan Aliran Penafsiran Hukum Tata Negara*.
[15] Amer et al., "Implications of the Constitution for Political Neutrality in the Dynamics of Law and Democracy."
[16] Muhtar et al., *Menimbang Keadilan: Dinamika Hukum Dan Demokrasi Di Persimpangan Zaman*.

and political interactions.[17] Digital technology, notably the internet and artificial intelligence, has created a new public space called cyberspace and is transnational in the sense that it is not entirely bounded by the boundaries of the state . This place provides a way for residents to engage, voice ideas, access public services and express identities and rights. The rapid, dynamic and transcendent nature of the digital world makes it difficult to execute the constitutional guaranties that have previously been developed primarily in the framework of physical life.

The development of contemporary constitutionalism theory gave birth to the idea of *cyber constitutionalism* or digital constitutionalism. This idea is a response to the challenges of the state of law in the digital environment that increasingly affects social, political, economic, and legal life. Digital constitutionalism departs from the question of how the basic principles of the constitution formed in analog societies can be applied, interpreted, and developed in accordance with the dynamics of the digital society.[18] Digital technology is no longer just an instrument of communication, but has developed as an infrastructure where freedom and power are exercised. This condition demands the application of constitutional values in the relationship between the state, citizens, technology corporations, and digital platform managers.[19]

The central idea of digital constitutionalism asserts that human rights should not be diminished simply because of the change of the medium from the physical world to the digital world. The digital space should be seen as a new domain for the implementation of private and public life so that the rights to privacy, freedom of expression, protection of personal data, and access to information must remain guaranteed.[20] A constitution in this context needs to be understood as a *living constitution* that has the ability to respond to technological developments without losing its fundamental value. Digital constitutionalism is not only concerned with the protection of individual rights, but must also include the collective rights of constitutionally recognized groups, including customary law societies.[21]

The existence of customary law communities as constitutional subjects is based on Article 18B Paragraph (2) of the 1945 Constitution of the Republic of Indonesia. This provision respects and appreciates the unity of customary law communities and their traditional rights as long as they live, in accordance with the evolution of society and the ideals of the Unitary State of the Republic of Indonesia and regulated in law. Article 28I paragraph (3) of the 1945 Constitution of the Republic of Indonesia additionally states that the cultural identity and the rights of traditional communities are respected in keeping with the development of the times and civilization. Article 32 paragraph (1) enhances the guaranty by providing community freedom to protect and develop cultural values. These three provisions demonstrate that the advancement of technology should be accompanied with the recognition of the existence, cultural identity, traditional knowledge and collective rights of customary law groups.

Digital change offers opportunity for customary law groups to better the application of their constitutional rights. Technology is an aid to documenting regional languages, customary laws, oral traditions, medical knowledge, environmental governance, customary

[17] Puluhulawa et al., "The Concept of Cyber Insurance as a Loss Guarantee on Data Protection Hacking in Indonesia."
[18] Mann et al., "The Limits of (Digital) Constitutionalism: Exploring the Privacy-Security (Im)Balance in Australia."
[19] Huda et al., *Data Pribadi, Hak Warga, Dan Negara Hukum: Menjaga Privasi Di Tengah Ancaman Digital*.
[20] Pernice, "Global Cybersecurity Governance: A Constitutionalist Analysis."
[21] Nggilu, "Menuju Amandemen Konstitusi Partisipatif: Telaah Normatif Terhadap Crowdsourcing Dalam Konteks Konstitusionalisme Digital Di Indonesia."

territories and traditional cultural manifestations. Digital platforms can also enable engagement of customary law communities in policymaking, facilitate access to public services, and offer venues for the expression of aspirations and the struggle for the acknowledgment of their rights. In this respect, the use of technology can promote the protection, development, utilization and development of culture as mandated in Law Number 5 of 2017 about the Advancement of Culture.

These opportunities do not automatically result in better protection of rights. Digital transformation can also increase the vulnerability of indigenous peoples if digital systems are built without considering the social, cultural, and legal characteristics that live in the community. The influence of digital transformation on the protection of the constitutional rights of indigenous peoples can be seen in at least four issues, namely digital access gaps, digitization of public recognition and services, protection of communal data, and the use of traditional knowledge and cultural identity in the digital system.

a. Digital access gap

The digital *divide* is a difference in people's abilities and opportunities to access and utilize digital technology. These challenges are still seen in disadvantaged, frontier, and outermost regions that have not received adequate internet access.[22] This condition causes some citizens to experience obstacles in accessing online education, electronic population administration, policy information, health services, and various other government services. The 1945 Constitution of the Republic of Indonesia has guaranteed the right to education in Article 31, the right to obtain information in Article 28F, and the right to equal protection and treatment before the law in Article 28D paragraph (1). Inequality in access to technology can cause the fulfillment of these rights depending on a person's place of residence, economic condition, and digital capabilities.

Indigenous peoples have more complex issues, as some communities are located in geographically remote places for which telecommunication infrastructure is difficult to build. The challenges faced are not only in the form of absence of networks but also limited devices, access charges, digital literacy levels, language problems, and incompatibility of service design with the socio-cultural conditions of the community.[23] The digitization of public services that are not accompanied by non-digital service alternatives can create indirect discrimination. Rights that are normatively available to everyone can ultimately only be enjoyed by groups that have the infrastructure, devices, and ability to access them.

The digital divide also limits the ability of indigenous peoples to participate in the policy-making that impacts their interests. Public consultation, the filing of appeals, administrative registration and access to information moved to digital platforms may restrict the participation of communities that do not yet have adequate access. This is different from substantive protections since equality of rights is not sufficient to be actualized by providing a shared platform, but also requires ensuring that each group has a meaningful ability to use it.

b. Digitization of public recognition and services

Digitizing government administration can speed up the collecting of data and the

[22] Jayanthi and Dinaseviani, "Kesenjangan Digital Dan Solusi Yang Diterapkan Di Indonesia Selama Pandemi COVID-19."

[23] Nurliatin, Fahmi, and Ardiansah, "Implementasi Pemberdayaan Komunitas Adat Terpencil."

identification of customary law groups. Information on communities, regions, institutions and traditional rights can form a basis for planning development and the provision of public services. Digitization can also help prevent loss of records and increase evidence of the existence of communities and their customary lands. These benefits can only come about if the data collection method is participatory and does not neglect the forms of evidence that exist in customary law communities.

Problems emerge where customary law communities are identified only on the basis of digital administrative data. Many customary laws are transmitted through social activities, oral traditions, judgments of customary stakeholders and collective memories, which are not usually recorded in writing or digital form. If formal databases are depended on, unregistered communities could be administratively treated as if they did not exist, even if they continue to exist, have customary institutions, territory and laws followed by their members. In such conditions, technology not only records the legal reality, but it also selects what communities are visible to the state and acknowledged by it.

Data standardization can also simplify the diversity of customary law communities into uniform administrative categories. Customary law has a dynamic character because it grows and develops with its people. Changing customary law into static data can eliminate context, differences in interpretation, and the authority of customary institutions to develop their laws. Digitization of recognition must therefore still respect the plurality of laws and not replace the substantive recognition process by simply fulfilling technical requirements in electronic systems.

c. Protection of communal data of customary law communities

Under customary law, community data does not always encompass the personal data of community members. The data may consist of customary areas, sacred locations, natural resources, language, genealogy, rituals, medical knowledge, agricultural patterns, ecological knowledge and any information that is shared with them. Such data has social, spiritual, cultural and economic significance to the community. For instance, information about the location of sacred sites or particular resources, if disseminated, can hurt the community, even if it doesn't expose the identify of an individual.

Law Number 27 of 2022 respecting Personal Data Protection defines personal data as data relating to an individual who is identified or can be identified individually or in combination with other information, either directly or indirectly, using electronic or non-electronic methods. The personal data subject is also defined as the person to whom the personal data relates. The construction above illustrates that the regime of personal data protection in Indonesia is focused to each person. There is no explicit legal regulation on data connected to customary law communities as a collective entity and authorities issue consent, limits on data usage, benefit sharing and recovery methods when data processing is detrimental to the community.

Individualization may lead to the agreement of one community member being taken as adequate for the processing of knowledge or information which is in fact shared with them. Indeed, the ownership of some data may be vested in indigenous stakeholders, certain groups in the community or all members under appropriate customary law. One person's consent is not the same as a group's consent. Protecting the constitutional rights of indigenous peoples means that the community can suffer losses from data processing, even if individual losses cannot be readily identified for each member.

The international discourse recognizes the concept of indigenous peoples' data

sovereignty which affirms the right of indigenous peoples to regulate the collection, ownership, access, interpretation, use, and dissemination of data about their communities, territories, and resources.[24] The concept was developed through *the CARE Principles for Indigenous Data Governance*, which consists of *collective benefit, authority to control, responsibility,* and *ethics*. The principle requires data governance to provide collective benefits, recognizes the authority of indigenous peoples to control data, places responsibility on those who use data, and places community rights and well-being as a primary consideration in the entire data cycle.[25]

d. Digitization of traditional knowledge and cultural identity

Traditional knowledge is an important part of the identity and sustainability of customary law communities. This knowledge can be in the form of treatment methods, the use of genetic resources, environmental governance, agricultural techniques, crafts, languages, folklore, music, dance, and rituals. Article 5 of Law Number 5 of 2017 concerning the Advancement of Culture includes oral traditions, manuscripts, customs, rites, traditional knowledge, traditional technology, art, language, folk games, and traditional sports as objects of cultural advancement.

Digital technology can help document and pass on this knowledge to the next generation. Digital documentation can also expand public awareness of cultural richness and prevent the loss of languages and traditions. Risks arise when knowledge that has been digitized can be copied, modified, commercialized, or incorporated into artificial intelligence training data without the knowledge of the community of origin. Knowledge that was previously only accessible based on customary permissions and procedures can turn into open information once it is entered into the internet.

Article 31 of *the United Nations Declaration on the Rights of Indigenous Peoples* recognizes the right of indigenous peoples to maintain, control, protect, and develop cultural heritage, traditional knowledge, traditional cultural expressions, and intellectual property related to them. The recognition indicates that digital documentation or dissemination should not eliminate the authority of communities over their knowledge. The interest of preservation also cannot be used as an excuse to take over community control of knowledge that has access restrictions based on customary law.

The development of international law also shows increasing concern for the protection of traditional knowledge. *The World Intellectual Property Organization Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge*, adopted on May 24, 2024, requires patent applicants to disclose the country of origin of the genetic resource or indigenous peoples or local communities that provide the relevant traditional knowledge if the invention applied for is based on that resource or knowledge. The instrument indicates that the use of traditional knowledge must be accompanied by recognition of the source and the communities that maintain it.

It might also be a question of representation, the digitization of cultural identity. Algorithmic systems and artificial intelligence can generate images, writings, music or designs that replicate the cultural manifestations of indigenous peoples, without knowing their social and spiritual background. Such outcomes can simplify, distort or misrepresent culture. Such use can also undermine the authority of customary law groups to decide how their cultural

[24] Kukutai and Taylor, *Indigenous Data Sovereignty: Toward an Agenda*.
[25] Carroll et al., "The CARE Principles for Indigenous Data Governance."

identities should be portrayed and exploited. The right to cultural identity guarantyd in Article 28I paragraph (3) of the 1945 Constitution of the Republic of Indonesia must also guaranty protection against distortion, non-consensual use and commercialization of cultural expressions in the digital environment.

Therefore, the digital transformation has a double impact on the protection of the constitutional rights of indigenous peoples. Technology offers chances to protect culture, increase information access, boost engagement, document indigenous areas and improve public services. It can also exacerbate inequality, promote administrative exclusion, remove community control over data and create space for the use of traditional knowledge and cultural identity without authorization.

The major concern is that the digital legal system of Indonesia is still oriented to citizens as persons. The 1945 Constitution of the Republic of Indonesia has acknowledged communities of customary law as collective subjects, but this recognition has not been completely realized in data governance and technology. Law Number 27 of 2022 on the Protection of Personal Data safeguards the data of individual persons, while Law Number 5 of 2017 on the Advancement of Culture recognizes traditional knowledge as an object of cultural advancement. "The two regulations have not yet created a complete mechanism on communal data control, collective permission, access limits, participation of customary institutions, benefit sharing and recovery of communal losses.

The influence of digital transformation on the protection of the constitutional rights of indigenous peoples is ultimately determined by the way the state places indigenous communities in technological governance. Digital transformation can strengthen constitutional rights if indigenous peoples are placed as participating subjects and have authority over their data and knowledge. This transformation can weaken constitutional protection if indigenous peoples are only placed as data collection objects, sources of knowledge, or recipients of services that must adapt to the country's digital system. Constitutional protection in the digital era must include equal access, recognition of customary evidence and procedures, protection of communal data, collective consent, control over traditional knowledge, and respect for the cultural identity of indigenous peoples.

3.2 Indigenous Data Sovereignty as a Construction of the Protection of Constitutional Rights of Indigenous Law Communities in Digital Transformation

Constitutional strategies in dealing with digital transformation cannot only be understood as technical adjustments to technological developments. Digital transformation has changed the power structure, the pattern of relations between the state and citizens, and the way information is collected, processed, and used in decision-making. Data has evolved into a source of power that determines access to public services, resource distribution, identity recognition, policymaking, and the development of artificial intelligence. These changes demand an expansion of the meaning of constitutionalism in order to be able to limit data-based power while protecting individual rights and collective rights in the digital space.

The Digital constitutionalism seeks to adapt constitutional values to the digital environment by protecting fundamental rights and limiting unaccountable exercises of power by both public authorities and private actors.[26] For customary law communities, however, a framework centred exclusively on individual personal data is insufficient because data concerning customary territories, sacred sites, natural resources, genealogy, languages,

[26] Celeste, "Digital Constitutionalism: A New Systematic Theorisation."

rituals, medicinal knowledge, cultural expressions, and ecological practices may embody collective social, spiritual, cultural, and economic interests. The collection or use of such data may therefore harm a community even when no identifiable individual suffers a direct privacy violation. Accordingly, digital constitutionalism must recognize not only individual rights but also the collective authority of customary law communities over data derived from their members, territories, knowledge, and resources.[27]

This collective dimension is articulated through Indigenous Data Sovereignty, which refers to the right of Indigenous Peoples to govern the collection, ownership, control, access, storage, interpretation, use, and dissemination of data concerning their communities. It does not signify separate state sovereignty but expresses collective self-determination in data governance. The CARE Principles for Indigenous Data Governance operationalize this authority through collective benefit, authority to control, responsibility, and ethics.[28] Applied to customary law communities in Indonesia, this framework requires their effective authority to determine what data may be collected, the purposes and duration of its use, who may access it, the benefits that must be shared, and when data must be corrected, deleted, restricted, or returned. It also includes the authority to prohibit access to sacred or confidential knowledge in accordance with customary law. This construction extends existing discussions of technology in customary-law documentation by placing collective authority, rather than documentation alone, at the centre of digital constitutional protection.[29]

a. Constitutional basis of Indigenous Data Sovereignty

The concept *of Indigenous Data Sovereignty* has not been explicitly mentioned in Indonesian laws and regulations. The normative basis can be constructed from the relationship between the recognition of customary law communities, self-protection, the right to obtain technological benefits, and respect for cultural identity in the 1945 Constitution of the Republic of Indonesia.

Article 18B paragraph (2) of the 1945 Constitution of the Republic of Indonesia recognizes and respects the unity of customary law communities and their traditional rights. This recognition places customary law communities as collective subjects that have values, institutions, territories, and traditional rights. Traditional rights in the development of a digital society need to be interpreted to include the community's authority over data that represents their territory, knowledge, resources, and identity.

Article 28I paragraph (3) of the 1945 Constitution of the Republic of Indonesia provides a guarantee that cultural identity and the rights of traditional communities are respected in line with the development of times and civilization. The phrase "in harmony with the development of times and civilization" provides the basis for the expansion of the protection of cultural identity into the digital space. The protection is not only related to the existence of culture in physical life, but also includes the way in which cultural identity, expression, and knowledge are recorded, stored, processed, and displayed through technology.

Article 28G paragraph (1) of the 1945 Constitution of the Republic of Indonesia guarantees the right to personal protection, family, honor, dignity, and property. This provision is the constitutional basis for the protection of personal data, but its use by customary law

[27] Carroll, Kukutai, and Walter, *Indigenous Data Sovereignty*.
[28] Carroll et al., "The CARE Principles for Indigenous Data Governance."
[29] Saleha et al., "Tinjauan Hukum Pasal 28E Ayat (3) UUD 1945 Dalam Pembatasan Kebebasan Berpendapat Di Media Sosial Di Indonesia."

communities needs to take into account the existence of collective losses. The disclosure of sacred locations, medical knowledge, or natural resource data can interfere with the honor, dignity, security, and economic interests of the community although it does not always cause individual losses.

Article 28C paragraph (1) of the 1945 Constitution of the Republic of Indonesia guarantees the right of everyone to benefit from science and technology. The fulfillment of these rights for customary law communities cannot be limited to providing access to technology. Customary law communities must also receive fair benefits when their data and knowledge are used for research, innovation, product development, or artificial intelligence training.

Article 32 paragraph (1) of the 1945 Constitution of the Republic of Indonesia guarantees the freedom of the community in maintaining and developing its cultural values. The authority to preserve culture includes the ability to determine how cultural knowledge and expression are documented and disseminated. Digitalization carried out without consent or contrary to customary rules can eliminate community control over the process of preserving their culture.

The relationship between these provisions forms the constitutional basis for the recognition of data sovereignty of customary law communities. Article 18B paragraph (2) provides a basis for collective subject recognition, Article 28I paragraph (3) protects cultural identity, Article 28G paragraph (1) protects honor and dignity, Article 28C paragraph (1) guarantees the right to obtain technological benefits, while Article 32 paragraph (1) guarantees the authority of the community in maintaining its culture. A systematic interpretation of these provisions shows that customary law communities must have a role in determining data governance that comes from their collective lives.

b. Limitations of data regulation in national law

The important basis for the protection of individuals in the processing of data is the Law Number 27 of 2022 concerning the Protection of Personal Data. Personal data means data relating to a recognized or identifiable natural person, as described in article 1 number 1. Article 1 number 6 position of the personal data subject as a natural person to whom the personal data relates. This architecture illustrates that humans are protected in their individuality.

The person-oriented of the Law Number 27 of 2022 about Personal Data Protection has not been able to reach all data characteristics of communities in customary law. Information about communities, customary areas, ecological knowledge, genetic resources or sacred locations cannot always be attributed to an individual. However, such usage of data can still lead to community losses, including loss of control over information, exploitation of resources, distortion of cultural identity and commercialization without benefit sharing. In the absence of identifiable persons, such data may fall beyond the protection of the personal data regulation.

The basis for the Consent in Law Number 27 of 2022 respecting Personal Data Protection is also in the connection between data controllers and individual data subjects. The authorities have not yet been regulated by the framework to grant consent for the communal data of the customary law communities. Certain knowledge may be under the authority of customary elders, customary institutions, indigenous women, knowledge goalkeepers or other groups according to the regulations that exist in the community, so that a member's consent cannot always be taken as communal consent.

Oral traditions, manuscripts, customs, rites, traditional knowledge, traditional

technology, art, language, folk games, and traditional sports have been acknowledged as objects of cultural development in Law Number 5 of 2017 concerning the Development of Culture. These policies are the foundation for the conservation and development of culture, but have not yet established a complete governance of communal data. Regulations on ownership of documentation data, access control, community approval, reuse, commercial usage and benefit-sharing are not sufficiently provided.

Presidential Regulation Number 39 of 2019 concerning One Data Indonesia establishes a framework for government data governance in order to produce data that is accurate, up-to-date, integrated, accountable, and easy to share. The orientation of openness and data sharing needs to be applied carefully to the data of customary law communities. Not all data that has been collected by the government is suitable to be opened or shared because some information can contain sacred value, show the location of resources, or reveal knowledge whose use is limited by customary law.

The regulatory gap shows that the data protection of indigenous peoples cannot be completely left to the private data regime, cultural advancement, or government data governance separately. The necessary legal construction must bring together constitutional recognition of indigenous peoples with digital data governance.

c. Principles of data governance of customary law communities

The suggested establishment of Indigenous Data Sovereignty is based on the CARE Principles for Indigenous Data Governance: collective advantage, control authority, accountability, and ethical considerations. Carroll et al. formulated these principles to enhance data-management frameworks that emphasise data transparency and reutilization yet inadequately consider power dynamics, communal interests, and the rights of Indigenous Peoples. The results of this research validate that, within the Indonesian context, mere data security and confidentiality fail to safeguard customary law communities when the existing legal framework does not acknowledge their collective rights over data originating from their lands, knowledge, cultural traditions, and community members.

The principle of collective benefit requires that data ecosystems provide tangible advantages for indigenous legal communities, including cultural preservation, institutional improvement, land protection, education, and community welfare. The governing body recognises the community's competence to establish the aims of data collection, conditions for access, storage procedures, repurposing guidelines, and termination of processing. Accountability requires data custodians to disclose the aims, risks, methodologies, benefits, and potential future uses of the data, while empowering the community to oversee its own information. Ethics dictates that the entirety of the data lifecycle should be regulated by community rights, cultural values, and social and spiritual well-being, irrespective of compliance with governmental regulations in data handling. These findings correspond with Carroll et al.'s claim that Indigenous data governance ought to emphasise humans and goals rather than solely technical data management.

This research, however, expands upon earlier academic work in two ways. Initially, while Carroll et al. elucidate the functional connection between CARE and FAIR data principles, this research interprets CARE as legal mandates within the Indonesian framework: acknowledgement of communal data, collective legal status, community-oriented consent, benefit distribution, joint impact evaluation, and efficient redress mechanisms. Secondly, previous Indonesian academic work has mostly focused on digital technology as a tool for recording customary law. This research distinguishes itself by addressing digitisation as a

constitutional matter related to the allocation of power among customary law communities, the government, scholars, and technological firms. Consequently, CARE serves not only as an ethical framework but also as a normative basis for reconfiguring communal data governance in the context of Indonesian digital constitutionalism.[30]

d. Recognition of communal data of customary law communities

The construction of *Indigenous Data Sovereignty* in Indonesia requires recognition of the communal data of indigenous peoples. Communal data can be formulated as data derived from, related to, or having an impact on indigenous peoples as a collective entity, including data on members, territories, resources, institutions, customary law, traditional knowledge, language, and cultural expressions.

Recognition of communal data does not exclude protection of personal data of community members. Some data is personal and social. For example, one person's health data is personal data, but a group of health data that reflects the genetic makeup of the community can have collective implications. Processing such data must be protected individually in accordance with Law Number 27 of 2022 concerning the Protection of Personal Data and collectively with the permission of the governance of customary law communities.

Community data needs require identification of customary law communities. The state cannot unilaterally choose on all categories as each society has a different view on ownership, confidentiality and jurisdiction over knowledge. Data that is open in one community may be sacrosanct or limited in other cultures. National arrangements should create general principles and categorization and access protocols should be prepared in accordance with their respective customary laws.

e. Collective consent and authority of customary institutions

Consent is an important element of data governance, but individual consent models are not adequate for indigenous peoples' data. The collection and utilization of communal data should be based on collective consent provided through community decision-making mechanisms. The process should respect the institutional structure, deliberative procedures, division of authority, and knowledge custodial groups within indigenous law communities.

Collective consent must be given before data is collected or used, based on complete information, and without pressure. The information provided includes the purpose of the processing, the type of data, the parties who gain access, the retention period, the possibility of further use, benefits to the community, risks, and mechanisms for termination of use. This construction is in line with the principle *of free, prior and informed consent* which places indigenous peoples as parties who have the right to make decisions on actions that affect their interests (United Nations General Assembly, 2007).

Collective consent should not be reduced to the signature of an indigenous leader if the law that lives in the community requires the deliberation or consent of a particular group. The position of women, the younger generation, knowledge keepers, and affected groups should be considered in accordance with the social structure of the community. Recognition of indigenous institutions should be accompanied by mechanisms to ensure that decisions truly reflect the collective will.

[30] Carroll et al., "The CARE Principles for Indigenous Data Governance."

f. Data access restrictions and classification

The right of customary law communities to regulate data calls for a classification method of data according to the extent of openness. Data can be categorized as open data, restricted data, confidential data and sacred data. The agreed objective is to use open data for the benefit of the public. particular persons or particular purposes may have access to limited data. Confidential data requires specific consent from the community. Customary law may forbid the digitization or dissemination of sacred data.

The classification has to be linked to the data through the information on origin, community authority, terms of use and ban of use. It is crucial to attach this information so that the data does not lose context when it is transported from one system to another. Data users should be cognizant of the fact that information availability does not strictly mean freedom to utilize information legally and ethically.

The right to limit access must also include the right to request correction, withdrawal, deletion or return of data. There ought to be procedures for communities to halt processing where the usage is incompatible with the intended intent, damaging or contrary to cultural values. This protection is especially critical for digital material because it is impossible to retract information that has been duplicated and spread.

g. Benefit-sharing and prohibition of exploitation

Data and traditional knowledge of customary law communities can have economic value for research, the pharmaceutical industry, agriculture, tourism, creative economy, and the development of artificial intelligence. The use of these benefits should not only provide benefits to outsiders. The principle of collective benefits requires a fair and mutually agreed benefit sharing.

Benefits are not always in the form of payment. They can take the form of capacity building, access to technology, infrastructure development, return of research results, recognition of knowledge sources, language preservation, shared ownership of innovation results, or support for community-defined programs. The type and manner of benefit-sharing must be decided through collective consent.

International developments through *the World Intellectual Property Organization Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge* reinforce the importance of recognition of traditional sources of knowledge. The agreement establishes the obligation to disclose the country of origin of genetic resources or indigenous peoples or local communities that provide related traditional knowledge if the invention in the patent application is based on that resource or knowledge (World Intellectual Property Organization, 2024). Disclosure of origin is an important step, but the data governance of indigenous peoples still requires consent, control of use, and benefit-sharing.

h. Impact assessment and institutional oversight

Impact studies of the processing of indigenous peoples' data need to go beyond measuring dangers to individual privacy. They should also address collective dangers such as discrimination, stigmatization, loss of control over information, disruption of sacred locations, exploitation of resources, distortion of cultural identity and intergenerational harm. "The communities need to be involved in defining what risk means because outsiders do not necessarily understand the social and spiritual value in data.

Monitoring data governance in communities with customary law involves the participation of governmental and customary entities. Data protection supervisory authorities

must have the power to hear complaints about collective losses. Institutions engaged in community affairs of culture, human rights and customary law need to be involved according to their authorities. Indigenous institutions must be recognized as parties capable of representing the interests of the community in giving approval, supervising use and submitting remedies.

The conflict resolution framework shall allow for options based on customary discussion, mediation, administrative settlement and judiciary. Recovery may take the form of cessation of processing, deletion of data, correction of information, apology, return of data, sharing of benefits, compensation and restoration of the community's good name. The mode of recovery must be determined by the nature of the loss and the value that lies in the customary law community.

i. Legal construction of Indigenous Data Sovereignty in Indonesia

The development *of Indigenous Data Sovereignty* does not have to be done by completely separating the data of indigenous peoples from the national legal system. A more appropriate construction for Indonesia is to integrate the recognition of collective rights into the framework of digital constitutionalism and legal pluralism. The state retains the authority to regulate data governance, while customary law communities gain effective authority over data sourced from and affecting the lives of their communities.

This structure can be built up from a number of elements. The first component is the normative identification of communal data of customary law communities as objects of legal protection. The second aspect is the acknowledgment of customary law communities as collective subjects with interests and losses from data processing. Third, the requirement that collective consent be obtained through community channels before data is collected or used. The fourth element is the right of the community to access, correct, restrict, withdraw and decide about reuse of data. The fifth is in the form of the commitment to share rewards for economic usage and innovation. The sixth element takes the shape of collective impact assessments and monitoring and recovery systems.

These regulations can be integrated into the implementing regulations of Law Number 27 of 2022 on Personal Data Protection, policies for cultural promotion, One Data Indonesia governance, and special regulations on the recognition of customary law communities. There is also a need for sectoral rules for research, artificial intelligence, genetic resources, health, environment and creative industries as each area has different forms of use and hazards.

Indigenous data sovereignty is ultimately more than just a matter of data ownership. The idea relates to the distribution of power in terms of who is able to produce knowledge, interpret identity, use cultural resources and exploit the digital transition. The recognition of data sovereignty permits indigenous law groups to retain links between data, territory, knowledge, identity and the viability of their communities.

The building of a digital constitutionalism for communities of customary law must join the protection of individual rights to the recognition of collective rights. The idea of Indigenous Data Sovereignty is employed to safeguard the communities as collective subjects, while the protection of the community members as individuals is still applied based on Law Number 27 of 2022 about the Protection of Personal Data. This results in data governance that is technically secure, constitutionally fair, and in accordance with customary law, and that respects the dignity and cultural identity of customary law communities.

4. Conclusion

In addressing the initial research enquiry, digital revolution exerts a dual influence on the constitutional rights of customary law communities. It has the potential to broaden access to knowledge, learning, governmental services, civic engagement, and cultural conservation. Nonetheless, disparities in infrastructure and digital literacy could hinder the realisation of such advantages, whereas digital administrative frameworks might marginalise communities lacking formal acknowledgement or unable to meet standardised registration criteria. Furthermore, the accumulation of information regarding customary lands, natural assets, lineage, community constituents, and indigenous knowledge could undermine communal authority and render cultural identity vulnerable to misrepresentation, exploitation, and commodification without approval. Digital transformation enhances constitutional safeguards just when it is paired with equitable access, significant community involvement, and acknowledgement of collective rights.

In addressing the second research enquiry, Indonesian digital constitutionalism ought to integrate Indigenous Data Sovereignty via six components: acknowledgement of communal data; acknowledgement of customary law communities as holders of collective rights; consent derived from customary decision-making processes; community governance over data access, utilisation, re-utilization, rectification, deletion, and restitution; equitable distribution of benefits and collective impact evaluation; and institutional supervision coupled with efficacious remedies for collective detriment. This framework is based on Articles 18B paragraph (2), 28C, 28G, 28I paragraph (3), and 32 of the 1945 Constitution and must be incorporated into the personal data protection, cultural development, electronic system, and One Data Indonesia initiatives.

The legal ramifications of this study indicate that Indonesia's data-protection system must extend beyond only identifiable people to encompass legislative acknowledgement and procedural safeguards for communal data and collective detriment. This necessitates legal or regulatory frameworks that delineate communal data, ascertain community representation and consent, institute benefit-sharing and impact-assessment responsibilities, and offer administrative and judicial recourse. This research is confined to a doctrinal examination and does not empirically investigate data-governance practices in specific customary law communities or the institutional capabilities of governmental bodies to execute the suggested framework. Subsequent investigations ought to evaluate governance structures unique to communities and the pragmatic viability of enacting Indigenous Data Sovereignty across various sectors and locales.

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Authors' Contribution

Yenny Febrianty: Conceptualization, Data curation, Funding acquisition, Formal analysis, Methodology, Writing – original draft, Writing – review & editing.

Saharuddin Saharuddin: Formal analysis, Investigation, Methodology, Project administration, Resources.

Ramadhan Usman: Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

Statement of the Use of AI

The authors declare that, during the process of writing this paper, they used generative AI to refine the grammar, readability, and language; however, all research outputs and content were reviewed and verified by the authors.

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