



From Policy to Practice: What Explains the Gaps in Voter List Accuracy in Indonesia's Dispersed Island Districts?

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ABSTRACT

This study examines the persistent gap between centralized voter registration policy and its local implementation in Indonesia's geographically dispersed island districts, focusing on Flores Timur in East Nusa Tenggara Province. The aim is to understand why voter registration inaccuracies undermine democratic inclusion despite institutional reforms and digital innovations. Using a qualitative case study approach, the research draws on 28 in-depth interviews with electoral officials, civil registry personnel, and community stakeholders, complemented by document analysis. The findings reveal three interrelated problems: institutional fragmentation between the General Election Commission (KPU) and the Civil Registry Office (Disdukcapil); lack of real-time interoperability between the Sidalih and e-KTP data systems; and procedural redundancies due to multi-level manual validations. These challenges result in the persistent exclusion of eligible voters, particularly in remote and marginalized communities. Moreover, the study documents how local actors respond through informal workarounds, such as using village records and social networks, which further entrench inequality and data inconsistency. As a key theoretical contribution, this article introduces the concept of data governance dissonance to explain how institutional and technological misalignment perpetuates electoral exclusion in decentralized and resource-constrained democracies. The study provides insights for improving voter registration systems in fragmented governance settings globally.

INTRODUCTION

In democratic systems, the legitimacy of electoral outcomes fundamentally depends on the integrity and inclusiveness of voter registration processes, which function not merely as administrative tools but as essential gateways to democratic representation. As Birch (2012) argues, "flawed voter registers can distort democratic participation and erode public trust in electoral institutions." Empirical evidence across transitional democracies has confirmed that inaccurate, outdated, or incomplete voter lists significantly undermine electoral fairness, participation, and legitimacy (Andayana et al., 2023; Norris, 2012; Schedler, 2002).

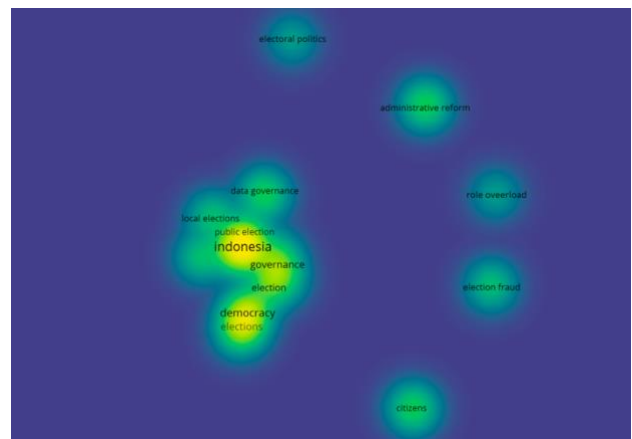
The central purpose of this study is to examine the persistent implementation failures in Indonesia's voter registration system, particularly in dispersed island districts like Flores Timur, and to propose a new conceptual model, *data governance dissonance*, that explains these failures through the lens of institutional fragmentation and technological misalignment. This study is significant because it moves beyond normative policy analysis and interrogates the structural and contextual variables that impede the realization of universal suffrage, especially in geographically marginalized regions. Doing so advances academic understanding and practical insight into electoral inclusion within archipelagic and decentralized democracies.

What sets this research apart is its attempt to bridge the literature on electoral governance, public administration, and digital infrastructure through a grounded case study of Flores Timur. Despite considerable scholarly focus on voter suppression, political clientelism, and electoral malpractice in Indonesia (Aspinall et al., 2016; Mietzner, 2012), little has been written about the technical-institutional underpinnings of voter list management, particularly within the fragmented governance ecosystems of remote districts. This study thus addresses a

critical research gap in Indonesian electoral studies and broader discussions on the intersection of data governance and democratic inclusion.

To empirically substantiate this gap, a bibliometric analysis using VOSviewer (based on Scopus-indexed publications from 2010–2023 with the keywords "voter registration," "data governance," and "Indonesia") reveals three dominant clusters: (1) governance; (2) election; (3) democracy. However, data governance in peripheral regions remains underexplored, especially regarding system interoperability and bureaucratic disjuncture. This absence reinforces the study's novelty in conceptual and geographic scope.

Figure 1. Bibliometric Mapping of Scopus Publications (2010–2023) on Public Election Management in Indonesia



Source: Authors' construct, 2025

Moreover, this study is situated within a broader international discourse on the challenges of electoral governance in geographically complex democracies. For instance, Kimura (2015) document how fragmented digital systems in the Philippines produce inflated and inaccurate voter lists. Chaudhary et al. (2023) shows that conflicts between the Election Commission and the UIDAI over data control have disrupted synchronization efforts in India. These international cases highlight that even well-resourced electoral systems struggle with interoperability and institutional coordination, issues even more acute in resource-constrained settings like Indonesia's eastern peripheries.

This research addresses the persistent misalignment between centralized voter registration policy and its fragmented, error-prone implementation at the local level in island districts. This misalignment is not merely technical but fundamentally institutional, resulting from disconnected mandates, siloed digital infrastructures, and inconsistent field-level execution. This problem is especially salient in Flores Timur, East Nusa Tenggara, a district that exemplifies the combined effects of infrastructural underdevelopment, bureaucratic fragmentation, and demographic volatility.

Flores Timur is emblematic of institutional fragility and geographic marginality. With scattered islands, limited connectivity, and persistent poverty, the district illustrates how national policy ambitions frequently falter amid localized implementation deficits. Unregistered internal migrants, undocumented residents, and outdated population databases coalesce into systemic under-registration, creating electoral distortions that disproportionately affect people with low incomes, mobile, and socially peripheral. These patterns undermine the credibility of the voter list (*Daftar Pemilih Tetap* or DPT), a foundational component of electoral justice as mandated under Indonesia's Law No. 7/2017 on General Elections.

Credible evidence shows severe implementation gaps despite adopting digital platforms such as Sidalih (*Sistem Informasi Data Pemilihan*) and the national e-KTP identity system. A report from Bawaslu (2020) reveals that list inconsistencies are among the most frequent electoral complaints, particularly in remote provinces like NTT, Papua, and Maluku. Technological advancement has thus not translated into administrative accuracy, revealing a deeper governance problem.

In such contexts, the reliability of voter lists is not merely a technical or operational concern but a fundamental issue of political rights and democratic legitimacy. As Schmidt & Wood (2019) contend, democratic legitimacy cannot be secured without sufficient administrative capacity to translate formal legal entitlements into effective procedural inclusion. This assertion resonates with the Indonesian case, where institutional and technological limitations restrict the realization of inclusive electoral governance, particularly in remote regions.

The academic literature on electoral integrity has long acknowledged the centrality of voter registration. Comparative studies underscore how flaws in the registration process, whether through exclusion, duplication, or outdated records, erode citizen confidence and undermine legitimacy. However, most of these studies focus on systemic electoral fraud, political manipulation, or legislative frameworks, leaving the administrative mechanisms of voter list management relatively underexplored, especially in Indonesia (Andayana et al., 2023; Elven & Al-Muqorrobini, 2021; Kriswantoni, 2018).

While prior research in Indonesia has provided critical insights into electoral clientelism and political patronage (Aspinall et al., 2016; Mietzner, 2012), there is a paucity of research focusing on the operational challenges of voter data accuracy and cross-agency coordination. Existing work overlooks the granular, field-level dynamics of electoral administration, particularly in under-resourced districts. As a result, Indonesia's voter registration system remains treated as a top-down technical exercise rather than a contextually negotiated governance process.

Moreover, geographic complexity is a crucial but undertheorized dimension of electoral exclusion. While Nasution (2016) notes regional disparities in public service delivery, little research has addressed how spatial dispersion, combined with administrative and digital fragmentation, contributes to systemic disenfranchisement. In island districts like Flores Timur, geography functions as a logistical barrier and an administrative exclusion zone, effectively removing entire populations from electoral representation.

This study addresses these critical knowledge gaps by foregrounding three interlinked theoretical and empirical contributions. First, it centers on the data governance dissonance concept, the misalignment between centralized policy frameworks, digital infrastructures, and localized administrative execution. Second, it empirically grounds this concept in a real-world case study of Flores Timur, offering granular insights into how policy failures materialize on the ground. Third, it reframes voter registration not simply as a bureaucratic task but as a multilevel governance challenge, requiring coordination across institutional, technological, and social domains.

By integrating insights from policy implementation theory and data governance literature, this study offers a novel analytical framework for understanding persistent inaccuracies in Indonesia's voter registration system. Sabatier and Mazmanian (1980) emphasize that policy success depends not only on sound design but also on favourable conditions of implementation, legal clarity, resource adequacy, actor commitment, and external support. Flores Timur presents a case where many of these enabling conditions are absent or fragmented.

Complementing this is the data governance perspective articulated by Pribadi & Iqbal (2022), who argue that effective data systems in public administration require explicit structures of ownership, stewardship, and quality control. When such structures are weak or contradictory, as is the case in Indonesian electoral governance, data becomes a contested terrain, with unclear mandates, redundant validation processes, and unreliable outcomes.

Furthermore, the Indonesian case aligns with international findings that underscore the vulnerability of electoral systems to fragmentation in the absence of interoperable infrastructures and cross-agency accountability. For example, in the Philippines, Garcia and Juliano (2019) documented how data mismatches between national and barangay-level systems created 'phantom voters' and inflated rolls. In Uganda, Piccolino (2015) showed that the lack of standardized protocols in biometric voter registration left field officials reliant on informal discretion, producing unequal access to electoral participation.

This comparative evidence affirms the urgency of the research problem and positions this study as nationally grounded and internationally relevant. It also underscores the transnational applicability of the proposed concept of data governance

dissonance, which could inform electoral reforms in other archipelagic or decentralized democracies.

Based on the empirical and theoretical concerns outlined above, the central research problem addressed by this study is clearly stated as follows: Why do gaps persist between centralized voter registration policy and its local implementation in geographically dispersed island districts in Indonesia? This research problem is grounded in evidence of repeated administrative failure and electoral exclusion in regions like Flores Timur, and it reflects a broader challenge faced by transitional democracies with fragmented governance architectures.

To answer this research problem, the study pursues three core objectives. First, it aims to identify the institutional and technical mechanisms that produce inaccuracies in voter lists within peripheral districts, particularly those marked by spatial isolation and limited state capacity. Second, the study seeks to analyze how data governance structures, such as data ownership, stewardship, and interoperability, shape the effectiveness or failure of electoral policy implementation. Third, it develops a new conceptual model of data governance dissonance that theorizes the persistent misalignment between policy design at the national level and execution at the grassroots level, especially in digitally and institutionally fragmented governance systems.

The conceptual innovation of this study lies in the introduction and operationalization of *data governance dissonance*. This term describes the systemic incongruence between multiple data systems (e.g., *Sidalih* and e-KTP), divergent institutional mandates (e.g., KPU and *Disdukcapil*), and the lack of enforceable coordination mechanisms. Such dissonance leads to recurring exclusion of eligible voters, delays in verification, and redundant manual validations, despite the existence of advanced legal and digital frameworks.

This model extends previous work on implementation failure by integrating it with data governance theory. Whereas classic implementation studies (Grindle, 2017; Pressman & Wildavsky, 1973) have focused on actor coordination and resource flow, this study underscores the role of data ecosystems and institutional interoperability as preconditions for implementation success, an angle still underdeveloped in the policy literature.

Moreover, this research engages with international perspectives by situating Indonesia's electoral challenges within a broader global conversation about digital statecraft, data fragmentation, and administrative justice. For instance, recent European studies (James, 2019; van Zoonen, 2016) emphasize the need for unified, citizen-centered data architectures to enhance public trust. In low-income and middle-income democracies, however, fragmented infrastructures often exacerbate exclusion rather than correct it, a pattern in India, Nigeria, Nepal, and the Philippines.

Thus, while the empirical focus of this article is Flores Timur, the analytical framework of data governance dissonance can serve as a tool for comparative policy analysis across similarly fragmented electoral environments. It also holds potential for future research on e-government integration, civic data management, and the implementation of national identity systems in decentralized polities.

In sum, this study contributes to the existing literature in four distinct ways. First, it refines the understanding of voter registration not as a one-time technical act but as a continuous governance process involving multiple actors and systems. Second, it expands the analytical lens of policy implementation

theory by integrating it with the emerging literature on data governance and institutional interoperability. Third, it introduces a novel conceptual framework, *data governance dissonance*, with explanatory value for electoral exclusion in decentralized settings. Fourth, it reinforces the international relevance of electoral studies in Indonesia by drawing empirical parallels with other fragmented democracies.

By addressing these gaps and offering grounded theoretical and policy insights, this study seeks to inform academic debates and practical reforms in the administration of democratic elections. In doing so, it affirms that administrative inclusion is necessary for political inclusion and that electoral integrity cannot be realized without first ensuring the governance integrity of the data systems upon which it depends.

The structure of this article is as follows: method, results, discussion, and conclusions.

METHOD

This study adopted a qualitative single-case approach to investigate the persistent gap between centralized voter registration policy and local-level implementation in Indonesia's dispersed island districts (Creswell, 2018). Flores Timur was purposively selected as the primary research site due to its complex bureaucratic landscape, fragmented geography, and administrative exclusion history, making it ideal for studying the institutional and technical determinants of voter list accuracy.

Data were collected using multiple qualitative instruments. Primary data consisted of 28 semi-structured interviews with key stakeholders, including officials from the General Election Commission (KPU), Civil Registry Office (*Disdukcapil*), village heads, RT/RW leaders, election volunteers (PPS/PPDP), and civil society observers. Respondents were selected through criterion-based and snowball sampling, focusing on institutional affiliation, functional involvement in voter registration, and experiential knowledge of voter exclusion or procedural failure. Table 1 summarizes the composition of informants, reflecting diversity across formal and informal electoral actors and offering insights into standardized procedures and local adaptations.

Table 1. Research Informants

No.	Category	Informants	Role Summary
1	KPU Officials	6	Oversee Coklit and voter list
2	Disdukcapil Officers	4	Manage e-KTP data and sync with Sidalih
3	Village Heads/ Secretaries	5	Link voters to PPDP; manage local data
4	RT/ RW Leaders	3	Assist verification; identify unregistered
5	PPS/PPDP Volunteers	4	Conduct door-to-door data collection
6	Religious/Customary Leaders	3	Support inclusion in remote areas
7	Civil Society & Journalists	2	Monitor and report registration issues
8	Community Members	1	Share experiences of exclusion or error
Total		28	

Secondary data included document analysis of electoral laws, technical manuals, and inter-agency correspondence related to *Sidalih* and e-KTP integration. Additionally, **field observations** were conducted during the *Coklit* (voter verification) phase in three remote villages, Wotan Ulumado, Tanjung Bunga, and Lamahera, selected for their high exclusion risk and poor digital infrastructure. These observations allowed the researcher to assess implementation dynamics in real-time (Koenig & Eagly, 2014).

All data were analysed using **thematic coding** in NVivo 12, guided by policy implementation and data governance theories (Edwards-Jones, 2014). The hybrid deductive-inductive approach identified institutional fragmentation, interoperability gaps, and informal adaptations. Figure 2 illustrates the research process, from site selection to data triangulation and theory-informed analysis. Ethical approval was obtained from the author's institution. All participants gave written informed consent and were assured of confidentiality and voluntary participation.

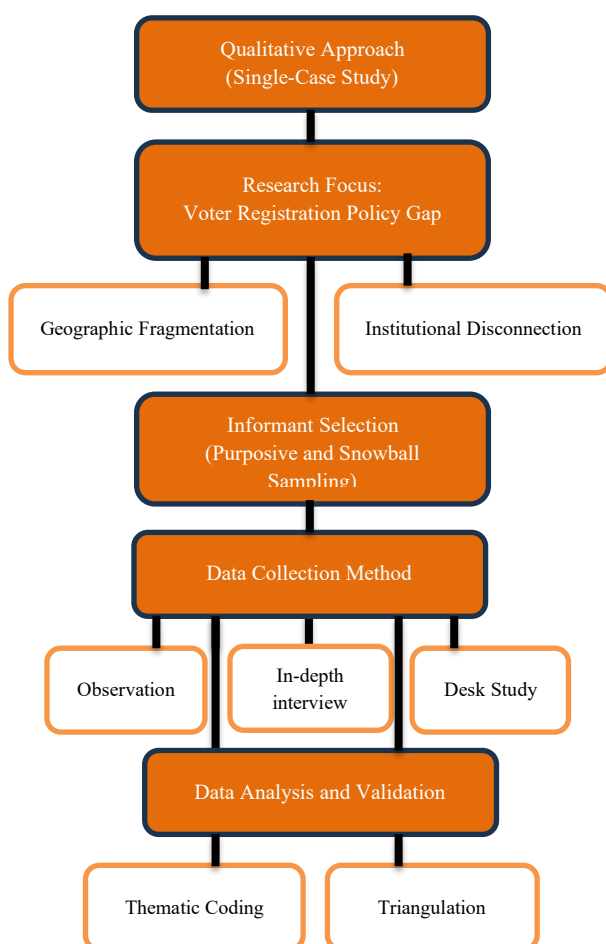


Figure 2: Research Process Flowchart
Source: Authors' construct, 2025

RESULTS AND DISCUSSION

The central question of this study is why gaps persist between centralized voter registration policy and its local implementation in Indonesia's dispersed island districts finds its answer not in isolated administrative errors but in a layered structure of institutional fragmentation, data system incompatibility, and field-level improvisation. Evidence from Flores Timur demonstrates that policy design, though

normatively coherent, fails to interface effectively with local bureaucratic practice and data realities. This misalignment results in systemic exclusion, procedural redundancy, and the normalization of informal workarounds (see Figure 3).

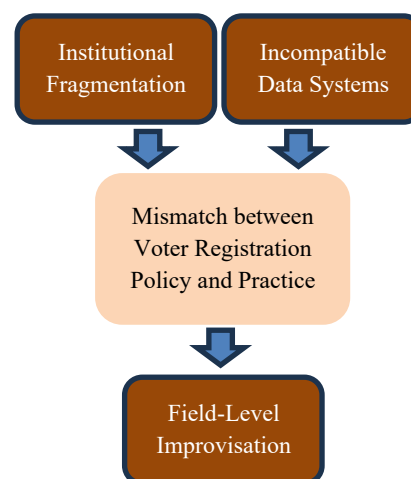


Figure 3. Structural Causes of Voter Registration Implementation Gaps
Source: Authors' construct, 2025

Institutional Fragmentation and the Breakdown of Interagency Coordination

This section addresses the first research question: Why do gaps persist between Indonesia's centralized voter registration policy and its implementation in island districts such as Flores Timur? The evidence suggests that these gaps are not merely technical but institutional, rooted in fragmented interagency coordination, particularly between the General Election Commission (*Komisi Pemilihan Umum/KPU*) and the Civil Registry Office (*Dinas Kependudukan dan pencatatan Sipil /Disdukcapil*).

Despite legal mandates requiring the integration of voter data via the national ID number system (*Nomor Induk Kependudukan/NIK*), these agencies operate under different digital infrastructures, formats, and timelines. Figure 4 visually captures this disconnect.

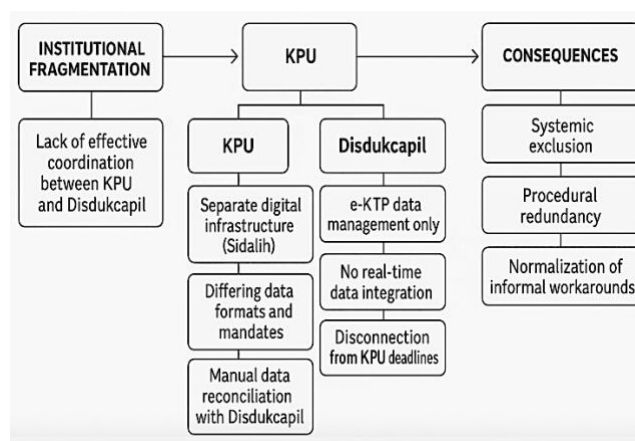


Figure 4. Institutional Fragmentation and Coordination Breakdown between KPU and Disdukcapil in Flores Timur
Source: Authors' construct, 2025

Our study noted that a KPU official stated, “We are expected to build the DPT using data from *Disdukcapil*, but there is no integrated platform. We get Excel files via email, sometimes outdated, sometimes incomplete, and not aligned with what we have on *Sidalih*” (Interview, 12 February 2024). This reflects a critical implementation gap, where the absence of interoperable systems forces local officials to rely on fragmented, manual data exchanges—undermining accuracy, efficiency, and the integrity of the voter list.

Sidalih developed as a centralized voter database, does not automatically integrate with the e-KTP system managed by *Disdukcapil*. More critically, no legal or procedural instruments enforce real-time data sharing, leaving field officers to improvise, using manual reconciliation, informal communication, or direct visits to update records. From the *Disdukcapil* side, frustrations are mirrored as the informant stated that “our task is to manage e-KTP data, not to chase KPU deadlines,” said a *Disdukcapil* officer. “We send updates if asked, but no system or regulation requires real-time integration.” (Interview, 14 February 2024)

This dynamic reflects a deeper issue: the absence of a formal coordination protocol, resulting in temporary, ad hoc collaboration that only intensifies during electoral cycles. Unlike effective intergovernmental models that rely on permanent cross-agency data integration (Garcia-Perez et al., 2023; Megawati et al., 2025), Flores Timur's system remains disjointed and reactive.

The implications are profound. No agency holds full accountability for the integrity of the voter list, a condition that echoes Lipsky's (2010) concept of *institutional drift*, where overlapping responsibilities and vague mandates undermine effective governance. Accountability becomes diffused in such contexts, and voter list compilation becomes a bureaucratic negotiation rather than a standardized administrative task.

This problem is not unique to elections. Cross-sectoral research in Indonesia's public administration, spanning healthcare, education, and social welfare (Handayani, 2023; Suryanto et al., 2021), has highlighted recurring themes of non-interoperable databases, siloed systems, and disjointed responsibilities. However, the urgency is more acute in elections due to inflexible legal timelines and the constitutional stakes of suffrage.

A village secretary in Flores Timur illustrated this time-sensitive dilemma: “We often get last-minute requests from KPU to verify population data, but *Disdukcapil*'s registry might not include those who just turned 17 or moved in recently.” (Interview, 17 February 2024)

This temporal mismatch produces what we term a “double exclusion effect.” Those already marginalized in civil registration systems, such as internal migrants, elderly individuals, or Indigenous communities, are more likely to be excluded from voter lists as well. Hence, administrative exclusion reinforces social exclusion, undermining the principle of universal suffrage.

To cope with this dysfunction, local officials develop “shadow coordination,” informal channels of collaboration that bypass official systems. One KPU subdistrict officer explained: “sometimes we just go to the *Disdukcapil* office, sit down, and ask for help. There's no protocol, but without that relationship, we'd get nothing.” (Interview, 16 February 2024)

While pragmatic, such arrangements erode institutional integrity. Data access becomes contingent on interpersonal familiarity, not legal mandates, raising concerns about transparency, accountability, and data security. These comparative cases reinforce this study's theoretical contribution.

As James (2019) argues, governance failure in electoral systems is less about legal absence than procedural incoherence. The Flores Timur case validates this insight in a developing, decentralized democracy. Here, decentralization has not been matched by data governance integration, creating what one informant called an “administrative blind spot.”

Moreover, the Indonesian case contributes to broader debates in electoral administration literature. While studies in Western contexts emphasize *voter fraud prevention* or *partisan redistricting*, this research highlights a different challenge: how fragmented bureaucracies fail to guarantee inclusion, particularly in geographically dispersed, infrastructure-poor settings (Birch, 2012; Norris, 2012).

In such environments, voter registration is not merely a technical task but a test of interagency trust, system interoperability, and the capacity for institutional coordination. When these elements are missing, administrative improvisation replaces procedural certainty, jeopardizing the credibility of democratic processes.

In conclusion, this section demonstrates how institutional misalignment between KPU and *Disdukcapil* lies at the heart of voter list inaccuracy in Flores Timur. This finding answers the core research question by showing that the persistence of policy-practice gaps stems from structural fragmentation rather than implementation failure alone. Without shared databases, synchronized timelines, and legally enforced collaboration, decentralization produces institutional drift rather than democratic deepening. Ultimately, this jeopardizes the electoral rights of the very citizens that democracy is meant to empower.

Technological Disjuncture, Incompatible Systems, and Coklit Challenges

This section addresses the second layer of the core research question: How and why technological infrastructure contributes to the implementation gap in centralized voter registration policy across Indonesia's island districts. The findings from Flores Timur reveal a persistent mismatch between centrally designed electoral technologies and the infrastructural, administrative, and social capacities available at the local level.

The Indonesian electoral system incorporates two leading digital platforms: *Sidalih* (*Sistem Informasi Data Pemilu*), the national voter information system developed by the General Election Commission (KPU), and the e-KTP system, managed by the Civil Registry Office (*Disdukcapil*), which contains the master database of Indonesian citizens. Both systems should work together, with *Sidalih* updating voter lists in real-time through NIK integration with e-KTP. However, as Figure 5 illustrates, this integration remains aspirational in Flores Timur.

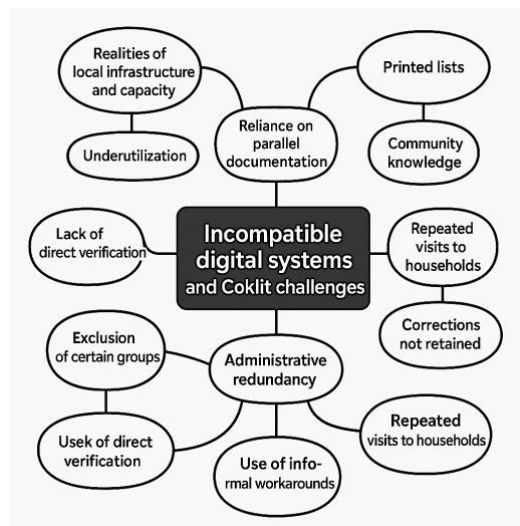


Figure 5. Technological Disjuncture in Voter Registration: A Mind Map of Systemic Challenges in Flores Timur
Source: Authors' construct, 2025

One of our informants stated that “there was no way to check updated data on the spot.” (Interview, 16 February 2024). It is not an isolated case. *Coklit* (*Pencocokan dan Penelitian*), a crucial process where officers verify and update voter data by visiting households, relies heavily on digital infrastructure. However, in Flores Timur, as in many rural and geographically dispersed districts, internet connectivity is often unreliable or absent. Enumerators are under-equipped and undertrained, pushing the process back to manual recordkeeping, using outdated printed lists, and relying on community memory.

A village secretary in Wotan Ulumado elaborated:

“We know more people live here than what appears on the list. If someone’s name is not printed, they are often skipped. We write them manually and inform KPU later.” (Interview, 17 February 2024)

These testimonies reveal a fractured data ecosystem where *Sidalih*, the centralized digital voter list system, coexists awkwardly with paper-based local records. The lack of interoperability between systems leads to inefficiencies, redundancies, and errors that frontline officers are left to resolve manually. “We spend days revisiting houses to cross-check names already submitted in past elections,” noted a PPS officer from Ile Boleng. “It’s frustrating, we don’t have the tools to do it properly.” (Interview, 18 February 2024)

As informants described, this “endless correction game” reflects structural and technological disjuncture, where errors persist across electoral cycles due to poor system integration. As confirmed by Hoffmann & Lutz (2021), the digital divide significantly affects political participation. Their study shows that inadequate internet access and limited digital literacy in remote areas hinder citizens from engaging fully with electoral processes.

The problem, however, is not solely technological but also institutional. As evident in studies such as Fauzi & Habibi (2023), digital reforms like Smart Election systems or e-voting often face resistance or underperformance in the absence of infrastructural readiness and public trust. They argue that smart electoral systems require more than technological adoption. They demand a robust legal framework and infrastructural investment. Without these supports, digitalization risks becoming a

symbolic reform with little substantive impact on electoral integrity.

Furthermore, institutional ambiguity in managing voter data, particularly between the KPU and *Disdukcapil*, compounds the problem. As Lilleker (2018) demonstrate, inaccuracies in voter data stem not only from technical limitations but also from the fragmented responsibility between electoral and civil registry institutions. Their findings align with what we observed in Flores Timur, where neither agency takes full ownership of data integration, resulting in repeated errors and blurred accountability.

This fragmentation of authority mirrors concerns raised by Noor & Marlina (2023) regarding the urgency of administrative reform within Indonesia’s election management bodies. They argue for a digitally integrated recruitment and governance system that limits political interference; something Flores Timur’s case exemplifies in reverse, where bureaucratic silos breed opacity and inefficiency.

Informal verification via village heads or religious leaders can enhance inclusion but introduces subjectivity and inconsistency. Scholars stated that electoral practices in rural areas often reflect elite control and identity politics, sidelining migrants, women, and the landless (Paudel, 2016; Tamang, 2018). In this context, social capital acts as a gatekeeper rather than an enabler.

These discretionary practices, especially during *Coklit*, reduce transparency and mirror findings by Partheymüller et al. (2022): when procedures are unclear, trust in electoral integrity diminishes. In Flores Timur, this is worsened by digital inequities, poor infrastructure and lack of training. As one civil registry officer stated, “Technology is good, but only if it works, we still rely on handwritten lists and neighbours” (Interview, 14 February 2024).

Rather than democratic backsliding, what occurs is an implementation gap that weakens electoral functionality (Garnett & James, 2023). The case of Flores Timur underscores a critical paradox: digital reforms meant to standardize can deepen exclusion unless accompanied by local empowerment and institutional safeguards (Cheeseman et al., 2018). Democracy is not just about tools but how they work in context.

Therefore, Flores Timur’s findings align with a growing body of literature that underscores the need for institutional alignment, interoperable systems, and localized digital infrastructure to bridge the gap between policy ambition and electoral inclusion. Digital tools should be integrated into electoral systems not as top-down replacements but as enablers of community-based, procedurally accountable, and context-sensitive electoral governance.

Manual Validation Redundancy and Bureaucratic Overload

This section answers the third layer of the research question by showing how redundant manual validation processes and the absence of data synchronization across electoral administrative levels contribute to persistent voter list inaccuracy in Flores Timur. What was initially intended as a safeguard mechanism has become a source of inefficiency, bureaucratic congestion, and potential exclusion, particularly in regions with limited digital infrastructure.

Indonesia’s voter registration process involves several sequential layers of manual verification. After household-level enumeration through *Coklit* (*Pencocokan dan Penelitian*) by the Petugas Pemutakhiran Data Pemilih (PPDP), data are submitted to the Panitia Pemungutan Suara (PPS), recompiled at the

subdistrict level by Panitia Pemilihan Kecamatan (PPK), and reviewed again by the district KPU. Each level edits, prints, annotates, or photocopies the voter list using formats that vary by district, primarily in non-digital or semi-digital form. Figure 6 outlines this complex verification chain.

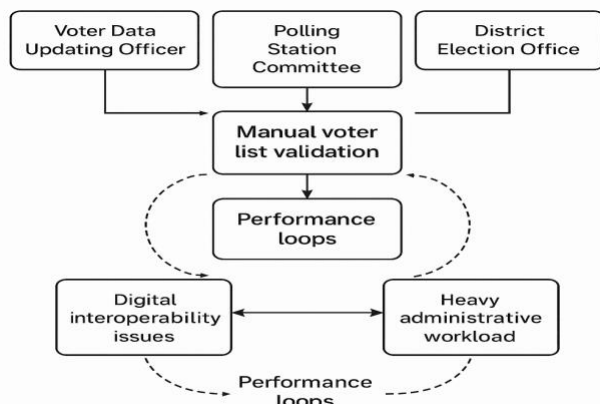


Figure 6. Manual Validation Redundancy and the Fragmentation of Electoral Data Governance
Source: Authors' construct, 2025

It reflects a core systemic flaw: validation without synchronization. In the absence of a real-time, integrated voter database shared across administration levels, each unit works with its version of the data. Changes made at one level are frequently overwritten by another, causing confusion and rendering earlier corrections futile. As one official said, the process feels like “checking the same thing four times with no final version.”

This condition reflects what Kristiyanto et al. (2023) identified as a failure in institutional resilience and internal cohesion. When electoral institutions operate in silos and lack a centralized system for updating and harmonizing data, validation procedures lose credibility. Instead of convergence, multiple verification layers generate divergent outputs that contradict one another.

Field-level officials often experience this process as demoralizing and distrustful. A PPS officer in Desa Lewotobi shared:

“We try to do our best during *Coklit*, but when we send the data, they say it is invalid or incomplete. Then, we are asked to go back and recheck. It is frustrating; we feel like our work is not trusted.” (Interview, 19 February 2024)

Multiple village secretaries and PPDP officers echoed such sentiments, describing the process as “looping,” where data circulate endlessly without institutional clarity on what constitutes the final, authoritative version. A *Disdukcapil* official admitted uncertainty about which version of the DPT was used on election day, pointing to broader institutional opacity.

Faced with procedural fatigue and unclear accountability, local actors often engage in informal adaptations. Village heads and secretaries create annotated lists separate from the official data. As explained by a village secretary in Lamahera:

“We update our own printed copy. We know our people. If someone is left off the KPU list, we just add them manually and bring it up during the final coordination meeting.” (Interview, 20 February 2024)

Such practices resonate with the findings of Nugraha et al. (2020), who show that in the absence of strong regulatory mechanisms and standardized procedures, electoral inclusion often depends on local discretion. It results in procedural inequalities, particularly when local officers are forced to make judgment calls in the absence of clear digital tools.

These conditions illustrate the dynamics of what Alles et al. (2021) refer to as “logistical fragmentation,” where electoral governance fails to achieve cohesion due to the disjointed nature of administrative and technological processes.

On one hand, these local adaptations reveal resourcefulness; on the other, they point to the absence of institutional standardization. The success of such interventions depends on the knowledge, initiative, and discretion of individual officers, qualities that are unevenly distributed across districts.

Similar issues are documented globally. For instance, Nugraha et al. (2020) show that in Indonesia’s 3T (frontier, outermost, and disadvantaged) regions, a lack of data interoperability and digital readiness creates multi-layered inefficiencies. These inefficiencies are not just operational but also normative, as they fail to guarantee citizens’ rights to be recognized and represented.

In Flores Timur, the cost of redundancy is not only administrative but psychological. PPDPs recount staying up late into the night rechecking names, only to receive further corrections from the district office. PPK officers report a declining interest in election volunteerism due to what they describe as a “never-ending verification burden.” These experiences point to burnout, fatigue, and declining motivation, particularly in areas already stretched thin regarding human resources.

The situation signals a broader governance failure: the inability to coordinate roles, responsibilities, and data ownership across electoral institutions. Instead of serving as a mechanism for error correction, validation becomes a ritualized performance of accountability without corresponding improvements in accuracy. In such contexts, procedural trust erodes, and public confidence in electoral integrity weakens.

Saksono (2020) underline this institutional vacuum, emphasizing the need for KPU’s regional bodies to adopt integrated digital workflows. They warn that without clear lines of data authority, electoral transparency becomes aspirational rather than actual.

To address this, reforms should focus on building a synchronized digital platform that allows collaborative editing, change tracking, and version control across all levels of the electoral administration. Ali & Jali (2018) suggest that cybersecurity laws must be integrated with electoral law to protect such platforms. Inegbedion (2021) highlight the need for equal infrastructural access across regions to avoid deepening the digital divide.

Moreover, field-level actors should be empowered with real-time access to these platforms and provided with training on their usage. Without this, Indonesia risks entrenching a system in which manual corrections substitute for structural reform.

In conclusion, this section highlights that manual validation redundancy is not simply a logistical issue but a reflection of deeper institutional and technological fragmentation. Rather than increasing accuracy, multiple verification layers may serve as bureaucratic rituals that mask the absence of system interoperability and real-time integration (Halimatusa’diyah & Jannah, 2025; Haryanto et al., 2024).

It answers the research question by showing that policy-practice gaps persist not because of intentional neglect but because existing bureaucratic procedures are misaligned with modern data governance needs. Unless these misalignments are addressed through synchronized systems and shared accountability, voter list verification will continue to be an exhausting, error-prone, and exclusionary process.

Field-Level Improvisation and Informal Bureaucratic Adaptation

This final analytical section addresses the fourth dimension of the research question: Why do policy-practice gaps persist in voter registration implementation across island districts? The evidence from Flores Timur demonstrates that, in the face of fragmented institutions and technological limitations, frontline bureaucrats engage in improvisational practices to prevent voter exclusion. While these practices are grounded in good intentions and contextual necessity, they also reveal the fragility of democratic administration when formal systems fail to function effectively.

Indonesia's centralized voter registration framework, anchored in platforms like *Sidalih* and e-KTP, aspires to ensure inclusivity and standardization. However, these tools are often mismatched with local capacity, infrastructure, and bureaucratic realities, particularly in remote areas such as Flores Timur. As a result, local officials must rely on discretion and informal workarounds to fulfill the mandate of electoral inclusion.

Village-level officers frequently reference locally maintained population lists, rather than national databases, when preparing the *Daftar Pilih Tetap* (DPT). These local records, often managed manually or maintained by neighbourhood heads (RT), are perceived as more accurate than national lists. These tend to lag behind population changes due to migration, aging, or lack of administrative updates. Officers deploy the *Daftar Pilih Khusus* (DPK) mechanism to bridge this gap to include those left off the official DPT.

A PPS officer from Ile Boleng explained:

"If we followed all the rules, many would be left out. We rely on RT and village elders to confirm names, especially for residents who recently moved or lost their IDs." (Interview, 18 February 2024)

An RT leader in Desa Lewotobi added:

"We help people register even if they are not on the printed list, as long as we know them and they bring an ID. Otherwise, they might not vote." (Interview, 19 February 2024)

These practices illustrate field-level discretion under electoral constraints, where informal networks help socially mediate inclusion for underrepresented groups (Dennissen et al., 2019). It aligns with "informal electoral governance," where local actors exceed formal roles to uphold stability and legitimacy amid competitive elections (Ayres, 2022), using bureaucratic flexibility to offset structural exclusion.

However, while these adaptations may enable access for some, they also introduce inconsistency and inequality. The application of discretion depends heavily on the individual's familiarity with local elites or community leaders. Several informants noted that individuals without strong social ties, seasonal migrants, unmarried women, or young renters were frequently overlooked, even when eligible. This means that inclusion is not based on citizenship but on recognition by community gatekeepers.

As Kubin & von Sikorski (2021) note in their analysis of social media polarization, such discretionary practices often reinforce existing power asymmetries and reduce democratic fairness. When discretion is exercised without accountability, it creates unequal access to basic political rights.

In Flores Timur, these informal practices serve as coping mechanisms in the face of institutional failure. As one KPU subdistrict officer explained, the absence of a real-time, synchronized database creates a situation where inclusion becomes a negotiation, not a guarantee:

"We do our best, but without up-to-date data, we depend on who the community knows. It's not perfect, but it's better than leaving people out." (Interview, 20 February 2024)

It echoes the argument by Gad (2023), who show that first-time voters often fall through the cracks of formal registration systems and rely on informal help to engage politically. Without digital literacy, trust in systems defaults to trust in individuals.

Such sentiments reveal the moral burden placed on frontline bureaucrats. They must balance legal compliance with ethical obligations to inclusion, often making difficult choices in uncertain environments. While this flexibility enables electoral participation in the short term, it also institutionalizes informality in the long term.

Moreover, trust in the system becomes personalized. Rather than being grounded in institutional procedures, access to voting rights depends on the discretion of village authorities. It undermines the credibility and legitimacy of democratic administration.

As highlighted by Kristiyanto et al. (2023), democratic resilience depends not only on ideology and party structure but on stable, predictable, and standardized procedures that apply equally to all. When voting becomes subject to informal vetting, it weakens this institutional foundation. Table 2 summarizes the major forms of informal adaptation observed in Flores Timur and their potential consequences to illustrate the scale of this challenge.

Table 2. Informal Bureaucratic Adaptation and Its Implications for Voter Inclusion

Informal Strategy	Purpose	Positive Outcome	Risk/Trade-off
Use of local RT lists	Fill gaps in DPT	Prevents exclusion	Reinforces elite-based inclusion
Manual entry in DPK	Include overlooked citizens	Expands participation	No standard validation protocol
Social verification	Confirm undocumented voters	Speeds up process	Opens space for manipulation
Delegated authority to elders	Reach hard-to-access voters	Leverages local trust	Discretion varies by community

Source: Authors' construct, 2025

This table shows that while informal adaptation is indispensable, it cannot substitute for structural reform. Without shared platforms, clear mandates, and enforceable coordination, these practices will continue to mask deeper governance problems. In particular, the lack of real-time data access, interoperability, and institutional accountability limits the transformative potential of voter registration reforms.

Additionally, informal mechanisms do not scale well. What works in one village may not work in another. Standardization is essential for equitable access, especially as Indonesia prepares for more complex electoral cycles with increasing numbers of eligible voters, many of whom are mobile, young, and digitally dependent. This finding reflects the need of technological reform based on context-based institutional strengthening rather than immediate digitization in areas with low infrastructure and high informality (Pradana et al., 2023).

In conclusion, this section demonstrates that field-level improvisation is both a solution and a symptom of governance failure. It answers the research question by showing that implementation gaps persist not because of frontline neglect but because formal systems are insufficiently responsive to local realities.

These findings contribute to the broader literature on hybrid governance in electoral systems, where formal rules and informal practices coexist, often in tension. As reflected in the Indonesian case, particularly in districts like Flores Timur, achieving electoral inclusion requires institutional responsiveness, not merely procedural formality.

Unless electoral governance in Indonesia moves toward integrated, accountable, and adaptive systems, voting rights will remain unevenly protected, and the constitutional promise of inclusion will depend more on social proximity than on legal entitlement.

CONCLUSION

The findings of this study reveal that persistent inaccuracies in Indonesia's voter registration system, particularly in dispersed island districts such as Flores Timur, stem not from a lack of policy per se but from structural deficiencies in electoral governance. Three interrelated problems were identified as central to this implementation failure. First, institutional fragmentation between the General Election Commission (KPU) and the Civil Registry Office (*Disdukcapil*) hinders effective data integration. Despite legal mandates for interoperability through the *Nomor Induk Kependudukan* (NIK), both institutions continue to operate in bureaucratic silos without shared platforms or protocols. Second, the study found a technological disjuncture in which national systems like *Sidalih* and e-KTP are neither accessible nor effectively utilized at the village level. As a result, field officers resort to outdated printouts and manual corrections that often reinforce, rather than resolve, underlying data inaccuracies. Third, repeated manual validation processes across administrative tiers result in procedural redundancy and fatigue without producing reliable or up-to-date voter lists.

These findings demonstrate that the voter registration problem in Indonesia is not simply a technical or operational issue but a manifestation of deeper systemic misalignments. In response, this study proposes the concept of *data governance dissonance* to describe the misfit between centralized digital infrastructure and decentralized administrative execution. This conceptual lens advances our understanding of how institutional contestation over data authority and incompatible governance logic can perpetuate electoral exclusion, especially in archipelagic democracies.

While offering an empirically grounded contribution, this study is not without limitations. Its insights are drawn from a single-case focus on Flores Timur and may not be directly generalizable across Indonesia. Although appropriate for exploring administrative dynamics in depth, the use of qualitative methods also means that temporal and regional variation remains

underexplored. Future research would benefit from comparative case studies in other districts and longitudinal or mixed-method approaches to assess the evolution of institutional coordination and data integration over time. In addition, exploring the political economy of electoral data governance, particularly the role of elite incentives and institutional inertia, would further enrich the analysis and extend the applicability of the data governance dissonance framework beyond the electoral sector.

REFERENCES

- Ali, F. A. B. H., & Jali, M. Z. (2018). Human-Technology Centric in Cyber Security Maintenance for Digital Transformation Era. *Journal of Physics: Conference Series*, 1018(1). <https://doi.org/10.1088/1742-6596/1018/1/012012>
- Alles, S., Pachón, M., & Muñoz, M. (2021). The burden of election logistics: Election ballots and the territorial influence of party machines in colombia. *Journal of Politics*, 83(4). <https://doi.org/10.1086/711899>
- Andayana, M. N. D., Pradana, I. P. Y. B., Sayrani, L. P., & Tele, M. (2023). Critical Factors Behind the Abstainer in the Local Election. *Jurnal Studi Sosial Dan Politik*, 7(2), 270–284. <https://doi.org/https://doi.org/10.19109/jssp.v7i2.19381>
- Aspinall, E., Sukmajati, M., & Fossati, D. (2016). Electoral Dynamics in Indonesia: Money Politics, Patronage and Clientelism at the Grassroots. *Contemporary Southeast Asia* (2016).
- Ayres, S. (2022). A decentred assessment of the impact of 'informal governance' on democratic legitimacy. *Public Policy and Administration*, 37(1). <https://doi.org/10.1177/0952076720904991>
- Birch, S. (2012). Electoral Malpractice. In *Electoral Malpractice*. <https://doi.org/10.1093/acprof:oso/9780199606160.001.0001>
- Chaudhary, S., Shah, S., Kakkar, R., Gupta, R., Alabdulatif, A., Tanwar, S., Sharma, G., & Bokoro, P. N. (2023). Blockchain-Based Secure Voting Mechanism Underlying 5G Network: A Smart Contract Approach. *IEEE Access*, 11. <https://doi.org/10.1109/ACCESS.2023.3297492>
- Cheeseman, N., Lynch, G., & Willis, J. (2018). Digital dilemmas: the unintended consequences of election technology. *Democratization*, 25(8). <https://doi.org/10.1080/13510347.2018.1470165>
- Creswell, J. W. (2018). Reserch Design Quslitative , Quantitative and Mixed methods Approaches. In *Sage* (Issue 9). <https://doi.org/10.1017/CBO9781107415324.004>
- Dennissen, M., Benschop, Y., & van den Brink, M. (2019). Diversity Networks: Networking for Equality? *British Journal of Management*, 30(4). <https://doi.org/10.1111/1467-8551.12321>
- Edwards-Jones, A. (2014). Qualitative data analysis with NVIVO. *Journal of Education for Teaching*, 40(2). <https://doi.org/10.1080/02607476.2013.866724>
- Elven, T. M. A., & Al-Muqorrobin, S. A. (2021). Consolidating Indonesia's Fragile Elections Through E-Voting: Lessons Learned from India and the Philippines. *Indonesian Comparative Law Review*, 3(1), 63–80. <https://doi.org/10.18196/iclr.v3i1.11298>
- Fauzi, A., & Habibi, M. (2023). Electronic Democracy: Enhancing Participation and Transparency through E-Voting. *Journal of Governance and Local Politics (JGLP)*, 5(2), 133–143. <https://doi.org/10.47650/jglp.v5i2.986>
- Gad, C. (2023). Trusting elections: complexities and risks of digital voting in Denmark. *Journal of Cultural Economy*. <https://doi.org/10.1080/17530350.2023.2246991>
- Garcia-Perez, A., Cegarra-Navarro, J. G., Sallos, M. P., Martinez-Caro, E., & Chinnaswamy, A. (2023). Resilience in healthcare systems: Cyber security and digital transformation. *Technovation*, 121. <https://doi.org/10.1016/j.technovation.2022.102583>

- Garnett, H. A., & James, T. S. (2023). Electoral backsliding? Democratic divergence and trajectories in the quality of elections worldwide. *Electoral Studies*, 86(June), 102696. <https://doi.org/10.1016/j.electstud.2023.102696>
- Grindle, M. S. (2017). Politics and policy implementation in the third world. In *Politics and Policy Implementation in the Third World*. <https://doi.org/10.2307/2619175>
- Halimatusadiyah, I., & Jannah, A. N. (2025). Understanding hidden layers in political participation: Women's representation in Indonesia's election management bodies. *Women's Studies International Forum*, 112(January), 103141. <https://doi.org/10.1016/j.wsif.2025.103141>
- Handayani, R. (2023). Perempuan dan Partisipasi Politik Elektoral (Dalam Tinjauan Sejarah). *Bogorkota.Bawaslu.Go.Id*.
- Haryanto, Irwan, A. I. U., & Amaliah, Y. (2024). Elections, governance, and polarization in Indonesian villages. *Asian Journal of Political Science*, 32(2), 175–193. <https://doi.org/10.1080/02185377.2024.2351400>
- Hoffmann, C. P., & Lutz, C. (2021). Digital Divides in Political Participation: The Mediating Role of Social Media Self-Efficacy and Privacy Concerns. *Policy and Internet*, 13(1). <https://doi.org/10.1002/poi.3.225>
- Inegbedion, H. E. (2021). Digital divide in the major regions of the world and the possibility of convergence. *Bottom Line*, 34(1). <https://doi.org/10.1108/BL-09-2020-0064>
- James, T. S. (2019). Comparative electoral management: Performance, networks and instruments. In *Comparative Electoral Management: Performance, Networks and Instruments*. <https://doi.org/10.4324/9781315545172>
- Juliano, H. (2019). Paul D. Hutchcroft, ed., Strong Patronage, Weak Parties: The Case for Electoral System Redesign in the Philippines. *Social Transformations: Journal of the Global South*, 7(2). <https://doi.org/10.13185/3223>
- Kimura, M. (2015). Information and communication technology and election administration in the philippines: An assessment of the nationwide automation of the 2010 and 2013 synchronized elections. *Philippine Political Science Journal*, 36(1). <https://doi.org/10.1080/01154451.2015.1024693>
- Koenig, A. M., & Eagly, A. H. (2014). Evidence for the social role theory of stereotype content: Observations of groups' roles shape stereotypes. *Journal of Personality and Social Psychology*, 107(3). <https://doi.org/10.1037/a0037215>
- Kristiyanto, H., Arinanto, S., & Ghafur, H. S. (2023). Institutionalization and party resilience in Indonesian electoral democracy. *Heliyon*, 9(12), e22919. <https://doi.org/10.1016/j.heliyon.2023.e22919>
- Kriswantoni, S. (2018). General Election Implementation in Indonesia'S National History in the Order of New and Reform. *Santhet: Jurnal Sejarah, Pendidikan Dan Humaniora*, 2(2).
- Kubin, E., & von Sikorski, C. (2021). The role of (social) media in political polarization: a systematic review. *Annals of the International Communication Association*, 45(3). <https://doi.org/10.1080/23808985.2021.1976070>
- Lilleker, D. G. (2018). Prototype politics: technology-intensive campaigning and the data of democracy. *Journal of Information Technology & Politics*, 15(4). <https://doi.org/10.1080/19331681.2018.1451424>
- Lipsky, M. (2010). Street-level bureaucracy: Dilemmas of the individual in public services. In *Street-Level Bureaucracy: Dilemmas of the Individual in Public Services*. <https://doi.org/10.2307/2392554>
- Mazmanian, D., & Sabatier, P. (1980). The Implementation of Public Policy: A Framework of Analysis. *Policy Studies Journal*, 2.
- Megawati, S., Alfari, M., Syamsul, M. R., & Pradana, G. W. (2025). Behavioral model integration in studying money politics in the 2024 election: perspectives of young Indonesian voters. *Public Administration and Policy*. <https://doi.org/10.1108/PAP-01-2024-0009>
- Mietzner, M. (2012). Indonesia's democratic stagnation: anti-reformist elites and resilient civil society. *Democratization*, 19(2), 209–229. <https://doi.org/10.1080/13510347.2011.572620>
- Nasution, A. (2016). Government Decentralization Program in Indonesia. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2877579>
- Noor, F., & Marlina, L. (2023). *Establishing Elections With Integrity In Indonesia: Purposes, Problems, and Solutions* (Issue Icdnr). Atlantis Press SARL. https://doi.org/10.2991/978-2-38476-148-7_19
- Norris, P. (2012). Why electoral integrity matters. In *Why Electoral Integrity Matters* (Vol. 9781107052802). <https://doi.org/10.1017/CBO9781107280861>
- Nugraha, A., Sari, N., Ningsih, G., & Ramdani, M. S. (2020). Peranan Komisi Pemilihan Umum Kabupaten Merangin Dalam Pemutakhiran Data Pemilih. *Datin Law Jurnal*, 1(1). <https://doi.org/10.36355/dlj.v1i1.334>
- Partheymüller, J., Müller, W. C., Rabitsch, A., Lidauer, M., & Grohma, P. (2022). Participation in the administration of elections and perceptions of electoral integrity. *Electoral Studies*, 77(October 2021), 102474. <https://doi.org/10.1016/j.electstud.2022.102474>
- Paudel, D. (2016). Ethnic identity politics in Nepal: liberation from, or restoration of, elite interest? *Asian Ethnicity*, 17(4). <https://doi.org/10.1080/14631369.2016.1179567>
- Piccolino, G. (2015). Making democracy legible? voter registration and the permanent electronic electoral list in Benin. *Development and Change*, 46(2). <https://doi.org/10.1111/dech.12148>
- Pradana, I. P. Y. B., Wijayanti, N. S., Andayana, M. N. D., & Oktavianto, A. B. (2023). Challenges in Developing Indonesia's National Innovation System for Strengthening the Bureaucratic Reform Agenda in the VUCA Era: A Literature Review. *Cendana International Conference of Public Administration* 2023, 49–64. <https://conference.undana.ac.id/semintadm/article/view/554>
- Pressman, J. L., & Wildavsky, A. (1973). *Implementation: How Great Expectations in Washington Are Dashed in Oakland; Or, Why It's Amazing that Federal Programs Work at All, This Being a Saga of the Economic Development Administration as Told by Two Sympathetic Observers Who Seek to Build Morals*. University of California Press.
- Pribadi, U., & Iqbal, M. (2022). Pivotal Issues of Democratic Governance: A Literature Review. *Jurnal Ilmu Sosial Dan Ilmu Politik*, 25(3). <https://doi.org/10.22146/jsp.63435>
- Saksono, H. (2020). Digital Pilkada: Have Local Elections (Pilkada) been Affected by Digitalization? Attainment, Challenges, and Policy Solutions. *Jurnal Bina Praja*, 12(2). <https://doi.org/10.21787/jbp.12.2020.287-299>
- Schedler, A. (2002). The menu of manipulation. In *Journal of Democracy* (Vol. 13, Issue 2). <https://doi.org/10.1353/jod.2002.0031>
- Schmidt, V., & Wood, M. (2019). Conceptualizing throughput legitimacy: Procedural mechanisms of accountability, transparency, inclusiveness and openness in EU governance. *Public Administration*, 97(4). <https://doi.org/10.1111/padm.12615>
- Suryanto, A., Nurdin, N., Saiyasopon, S., Mohamed, A. M., & Fathoni, A. T. (2021). Asymmetric Election: Political Decentralization As A Lesson Learnt From Indonesia 2019 Simultaneous Election Problems. *Jurnal Studi Pemerintahan*, 12(3), 220–241. <https://doi.org/10.18196/jgp.123136>
- Tamang, S. (2018). Ethnicity and democracy in the eastern Himalayan borderland: constructing democracy. *Asian Ethnicity*, 19(4). <https://doi.org/10.1080/14631369.2018.1442710>
- van Zoonen, L. (2016). Privacy concerns in smart cities. *Government Information Quarterly*, 33(3). <https://doi.org/10.1016/j.giq.2016.03.001>

<https://doi.org/10.1016/j.giq.2016.06.004>

