Proceeding International Conference on Economic Business Management, and Accounting (ICOEMA) 2025
Program Studi Doktor Ilmu Ekonomi
Universitas 17 Agustus 1945 Surabaya

THE RECONFIGURING STATE POWER THROUGH TECHNOLOGY: POLITICAL ECONOMY OF DIGITAL TRANSFORMATION IN PUBLIC SECTOR

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Received: April, 2025; Accepted: June, 2025; Published: June, 2024
Permalink/DOI:

Abstract

The rapid advancement of digital technology has reshaped how governments manage resources, deliver services, and exercise authority. This study explores the political economy dynamics of digital transformation within Indonesian public institutions, focusing on how technology reconfigures the distribution of power, accountability mechanisms, and institutional performance. Based on field data from government agencies undergoing digital reform, the research highlights how the adoption of information systems and digital tools is not merely a technical endeavor, but also a political process influenced by institutional interests, bureaucratic resistance, and policy incentives. The findings reveal that while digital transformation can enhance transparency and efficiency, its success depends on the alignment of political will, institutional capacity, and technological adaptability. This paper contributes to the broader discourse on digital governance by framing digital transformation as both a means of administrative modernization and a site of power negotiation within the state apparatus.

Key Words: Digital transformation, political economy, reform, transparency, e government

INTRODUCTION

In recent years, digital transformation has become a strategic agenda across public administration worldwide. Governments are increasingly leveraging information and communication technologies (ICTs) not only to improve efficiency and service delivery but also to enhance transparency and accountability. In Indonesia, this agenda has materialized through national programs such as the Electronic-Based Government System (Sistem Pemerintahan Berbasis Elektronik/SPBE), which seeks to integrate digital infrastructure into administrative processes at both central and local levels.

While normative expectations suggest that digital technologies will lead to more open, efficient, and accountable governance, the actual implementation reveals a more complex reality. Digitalization does not occur in a vacuum—it unfolds within existing institutional and political structures, often leading to tensions and transformations in how state power is exercised, distributed, and resisted.

This study explores the digital transformation of public administration in East Java Province, Indonesia, from a political economy perspective. It draws on mixed-method research that includes quantitative analysis using Structural Equation Modeling (SEM-PLS) and qualitative insights from in-depth interviews and field observations. Three central findings emerged from the research:

1. **Operational Efficiency and Structural Control**: The adoption of digital systems such as e-office, e-budgeting, and e-performance has led to increased administrative efficiency, reducing delays and redundancies. However, these technologies also reconfigure internal power dynamics by enhancing top-down monitoring and narrowing discretion among lower-level staff.
2. **Transparency Versus Regulatory Understanding**: While digital systems increase the visibility of financial data and organizational performance, the lack of comprehensive understanding of regulatory frameworks among civil servants limits their effectiveness in fostering meaningful accountability.
3. **Resistance and Organizational Culture**: The implementation of digital tools has encountered significant resistance, especially from senior staff who are less digitally literate. This resistance reflects a deeper conflict between traditional bureaucratic culture and the rationalized, performance-based logic imposed by digital technologies.

By situating digital transformation within the broader framework of political economy, this study argues that technology is not merely a neutral tool of administration but a medium through which state power is reshaped. The implications are profound, affecting not only how services are delivered but also how bureaucracies function, how authority is distributed, and how legitimacy is constructed in the digital era.

LITERATURE REVIEW

Digital transformation in public administration is not only a matter of technological innovation but also a reconfiguration of institutional structures, governance practices, and power relations. To analyze this complex process, this study is grounded in several interrelated theoretical perspectives:

New Public Management (NPM)

The theory of New Public Management (NPM) emphasizes the application of private sector management principles to public institutions. It promotes efficiency, performance-based accountability, and customer-oriented services. Digital transformation aligns with NPM by introducing technologies that enable faster service delivery, improved resource management, and measurable outcomes. However, this technocratic vision often overlooks the socio-political dynamics within bureaucracies, particularly how technology may be used to centralize control or suppress discretion.

Technology Acceptance Model (TAM)

Proposed by Davis (1989), the Technology Acceptance Model (TAM) explains how individuals adopt and use new technologies based on two main factors: perceived usefulness and perceived ease of use. In the context of public administration, TAM provides insight into the behavioral and organizational barriers to digital adoption. Civil servants' acceptance of digital systems is influenced not only by technological affordances but also by institutional readiness, digital literacy, and administrative culture.

Digital Government and Good Governance Framework

The good governance paradigm advocates transparency, accountability, participation, and responsiveness. Digital government tools, such as e-budgeting and performance dashboards, are seen as enablers of these principles. Yet, research has shown that digitalization does not automatically lead to better governance outcomes unless accompanied by robust policy design, capacity building, and institutional support.

Political Economy of Technology

From a political economy perspective, technology is not neutral. It is shaped by and shapes power relations. Digital systems may reinforce existing hierarchies or shift authority from individuals to algorithms and platforms. As Foucault (1977) noted, the use of information technologies in governance can be seen as an instrument of "governmentality"—a way to regulate populations through surveillance, datafication, and performance monitoring. In public administration, this manifests as new forms of control and resistance within the bureaucracy, as seen in the tension between efficiency-driven reforms and traditional bureaucratic norms.

Institutional Theory and Path Dependency

Institutional theory highlights how existing rules, norms, and routines shape organizational behavior. Path dependency explains how past decisions and institutional legacies constrain present choices. In Indonesia’s public sector, legacy systems, entrenched bureaucratic cultures, and fragmented IT infrastructures pose significant challenges to digital reform. These factors must be considered to understand the uneven and contested nature of digital transformation.

METHOD

This study adopts a **mixed-method approach**, combining quantitative and qualitative methods to comprehensively explore the dynamics of digital transformation in public administration. The integration of both methods enables the research to examine not only the statistical relationships between variables but also the deeper institutional, political, and behavioral aspects that accompany technological change.

Research Design

The research utilizes an **explanatory sequential design**, beginning with quantitative data collection and analysis, followed by qualitative exploration to interpret and enrich the statistical findings. This approach ensures that numerical trends are grounded in real-world contexts and narratives from within government institutions.

Quantitative Phase

- **Instrument**: A structured questionnaire was developed based on established constructs from the Technology Acceptance Model (TAM), New Public Management (NPM), and Good Governance indicators.
- **Respondents**: Civil servants working in provincial and local government agencies in East Java, Indonesia.
- **Sampling Method**: **Purposive sampling** was employed to target units that have adopted digital governance systems such as e-office, e-budgeting, and e-performance platforms.
- **Analytical Tool**: Data was analyzed using **Partial Least Squares Structural Equation Modeling (PLS-SEM)** through **SmartPLS** software. This method is appropriate for exploratory research, particularly when the theoretical model is complex and data distribution is non-normal.

Qualitative Phase

- **Data Collection**: In-depth interviews were conducted with key informants including heads of departments, IT officers, and administrative staff. In total, 8 interviews were held.
- **Observation**: Field observations were conducted in 3 digital service units to understand how technology is embedded in daily work routines.
- **Document Review**: Internal documents such as Standard Operating Procedures (SOPs), SPBE evaluation reports, and performance monitoring dashboards were analyzed to triangulate findings.

Variables and Hypotheses

The main constructs measured in the quantitative model include:

- Digital Transformation
- Operational Efficiency
- Public Accountability
- Technology Utilization
- Institutional Performance
- Moderating variables include **government regulation and policy support**.

Ten hypotheses were tested to explore direct and moderated relationships among these constructs.

Validation and Reliability

- **Instrument reliability** was ensured through pilot testing and Cronbach's Alpha analysis.
- **Validity** of constructs was tested through convergent and discriminant validity procedures in the SEM-PLS framework.

- **Triangulation** of methods and data sources strengthened the credibility of qualitative interpretations.

Ethical Considerations
All respondents were informed of the purpose of the study and gave consent to participate. Data confidentiality and anonymity were maintained throughout the research process.

RESULTS AND DISCUSSION
This study explored the implications of digital transformation in public administration, not only in terms of technical efficiency but also in relation to power dynamics, organizational behavior, and institutional change. The findings are categorized into three main themes:

Operational Efficiency and Structural Control
The quantitative analysis revealed a statistically significant relationship between the adoption of digital systems and increased operational efficiency. Units that implemented systems such as **e-budgeting**, **e-performance**, and **e-office** reported faster decision-making processes, reduced paperwork, and lower administrative costs.
However, the qualitative data suggested that this efficiency often comes at the cost of increased **structural control**. Digital systems centralize monitoring functions and produce real-time data for top-level supervisors, limiting the discretionary space of mid- and lower-level bureaucrats. This shift reflects a reconfiguration of internal state power—where performance metrics and data dashboards replace informal negotiation and bureaucratic discretion.
"Now every move is recorded and monitored," noted one senior official, *"you cannot just do things based on experience anymore; you must input everything into the system."*

Transparency vs. Regulatory Understanding
One of the central goals of digital governance is to enhance **transparency and public accountability**. Indeed, digital tools have made financial flows, procurement processes, and organizational performance more visible—both internally and, to some extent, to the public.
Yet, field observations and interviews revealed a **gap between visibility and comprehension**. Many civil servants lacked sufficient understanding of the regulatory frameworks underlying these systems. This led to "mechanical compliance"—staff followed procedures without fully grasping their legal or governance implications.
This mismatch limits the potential of digital transformation to foster meaningful accountability. Transparency without comprehension does not automatically lead to better decision-making or reduced corruption risks.

Resistance and Organizational Adaptation

While younger staff members generally embraced digitalization, there was notable **resistance from senior personnel**, particularly those unfamiliar with digital tools. Resistance manifested in both passive forms (e.g., delaying data entry) and active ones (e.g., lobbying to retain manual procedures).

This resistance illustrates that digital transformation is not merely a technical upgrade but a **cultural and political shift**. It threatens existing hierarchies and knowledge monopolies, especially when automation reduces the influence of senior bureaucrats whose authority was previously derived from institutional memory rather than systemized data.

Despite resistance, some departments succeeded in fostering **digital adaptation** by investing in internal training, appointing digital "champions," and restructuring work processes to align with system logic.

Synthesis of Findings

The findings suggest that digital transformation in public administration cannot be reduced to a neutral or technical reform. Rather, it is deeply embedded in **institutional histories**, **bureaucratic politics**, and **power relations**. Technologies such as e-budgeting and e-performance become instruments of surveillance, control, and even exclusion if not managed with sensitivity to organizational culture and readiness.

From a political economy perspective, digital governance both **empowers and disempowers**. It increases institutional capacity and monitoring but also disrupts entrenched power structures and introduces new tensions in the bureaucratic field. As such, the digitalization of the state should be seen as a contested terrain—one where power is reconfigured, not merely enhanced.

CONCLUSION

Conclusion

This study set out to examine digital transformation in public administration not simply as a technological upgrade, but as a process of reconfiguring state power through new instruments of governance. Drawing from empirical data in East Java's government institutions, the research reveals that while digital systems indeed improve administrative efficiency and transparency, they also reshape bureaucratic power relations and challenge existing institutional cultures.

Three key conclusions emerge:

1. **Digital transformation enhances operational efficiency**, but also consolidates control and monitoring from the top, thereby altering traditional patterns of decision-making and authority.
2. **Transparency mechanisms enabled by digital tools are only as effective as the regulatory literacy of civil servants**. Without proper understanding, these tools risk becoming symbolic rather than substantive instruments of accountability.
3. **Resistance to digital reform is not merely technical, but also cultural and political**. Senior personnel, often less digitally literate, perceive these changes as threats to their authority and influence.

These findings reinforce the idea that digital transformation is not neutral—it is shaped by and shapes the distribution of power within the state. Effective implementation, therefore, requires more than technological infrastructure; it demands strategic attention to institutional readiness, leadership, and adaptive capacity.

Policy Implications

Based on these conclusions, the following policy recommendations are proposed:

- **Invest in Digital Literacy and Regulatory Training**: Ensure that digital adoption is accompanied by targeted training on both system usage and the legal frameworks that govern them.
- **Adopt a Change Management Approach**: Treat digital transformation as an organizational change process. Anticipate resistance and engage staff through inclusive communication, phased implementation, and support mechanisms.
- **Design Technologies with Institutional Fit**: Avoid one-size-fits-all systems. Customize digital tools to reflect the organizational structure, workflow, and culture of each institution.
- **Enhance Participatory Design and Feedback Loops**: Include end-users (e.g., civil servants and public stakeholders) in the system development process to increase ownership and relevance.
- **Ensure Political and Regulatory Support**: Strong leadership, policy coherence, and regulatory clarity are essential to overcome bureaucratic fragmentation and ensure the sustainability of reforms.

In sum, reconfiguring state power through technology is a complex and contested process. It offers transformative potential, but only if approached with a critical understanding of the political economy of the state, rather than through a purely technocratic lens.

REFERENCES

Bannister, F., & Connolly, R. (2014). ICT, public values and transformative government: A framework and programme for research. *Government Information Quarterly*, 31(1), 119–128. https://doi.org/10.1016/j.giq.2013.06.002

Dunleavy, P., Margetts, H., Bastow, S., & Tinkler, J. (2006). Digital-era governance: IT corporations, the state, and e-government. *Oxford University Press*.

Mergel, I., Edelmann, N., & Haug, N. (2019). Defining digital transformation: Results from expert interviews. *Government Information Quarterly*, 36(4), 101385. https://doi.org/10.1016/j.giq.2019.101385

Wirtz, B. W., Weyerer, J. C., & Geyer, C. (2019). Digital transformation in the public sector: A systematic literature review and a research agenda. *Government Information Quarterly*, 36(4), 100385.

Kettunen, P., & Kallio, J. (2021). Public sector digital transformation and strategy: A systematic literature review. *Government Information Quarterly*, 38(3), 101567.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.

Cordella, A., & Tempini, N. (2015). E-government and organizational change: Reappraising the role of ICT and bureaucracy in public service delivery. *Government Information Quarterly*, 32(3), 279–286.

Janssen, M., & Estevez, E. (2013). Lean government and platform-based governance—Doing more with less. *Government Information Quarterly*, 30, S1–S8.

Setiawan, B. (2020). Evaluasi implementasi e-government pada sektor publik: Studi pada instansi pemerintahan daerah di Indonesia. *Jurnal Ilmiah Administrasi Publik*, 6(1), 1–10.
Paryono. (2018). Implementasi e-Government untuk meningkatkan transparansi dan akuntabilitas pemerintahan daerah. *Jurnal Kebijakan Publik*, 9(2), 45–54.

Syaifulloh, M. (2022). Pengaruh pemanfaatan teknologi informasi terhadap kinerja dan akuntabilitas pemerintah daerah. *Jurnal Akuntansi Daerah*, 5(1), 32–47.

Winarno, A., & Darmawan, D. (2021). Digitalisasi administrasi publik di Indonesia: Studi kasus implementasi SPBE di Jawa Barat. *Jurnal Transformasi Administrasi*, 11(2), 109–121.

Mahsun, M. (2006). *Pengukuran Kinerja Sektor Publik*. Yogyakarta: BPFE-Yogyakarta.

West, D. M. (2005). *Digital Government: Technology and Public Sector Performance*. Princeton: Princeton University Press.

OECD. (2020). *Digital Government Review of Indonesia: Towards a Digital Government*. OECD Publishing. https://doi.org/10.1787/4f9f3d2c-en