

Barriers to MSME Entry in Digital Government Procurement: An Analysis of NIB and INAPROC Account Requirements for Electronic Catalogue Version 6

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Abstract:

The mandatory implementation of E-Katalog Version 6 integrated with INAPROC since January 2025 has created significant entry barriers for Micro, Small, and Medium Enterprises (MSMEs) in Indonesian government procurement. The platform requires providers to possess formal administrative documents, specifically distinguishing between the Business Identification Number (NIB) issued through the OSS system and the Taxpayer Identification Number (NPWP), alongside deeds of establishment and corporate documentation. However, only 32 per cent of Indonesia's 64.2 million MSMEs hold such formal licensing. To analyze the alignment of these registration requirements with the prevailing legal framework, this study employs an empirical legal research method (socio-legal approach) supported by statutory and conceptual approaches. The findings reveal that these restrictive administrative prerequisites generate severe barriers to entry and market concentration, creating conditions that distort fair business competition as regulated under Law No. 5 of 1999. Consequently, a limited number of registered providers dominate government transactions, resulting in unfair pricing, budget inefficiency, and potential state financial losses. The study concludes that regulatory harmonization through the simplification of INAPROC registration requirements and systematic socialization programmes targeting MSMEs are essential policy measures to mitigate market concentration, restore healthy competition, and ensure inclusive participation in digital government procurement.

Keywords: barriers to entry; E-Katalog Version 6; fair competition; market concentration; MSMEs.

Abstrak:

Penerapan wajib E-Katalog Versi 6 yang terintegrasi dengan INAPROC sejak Januari 2025 telah menciptakan hambatan masuk yang signifikan bagi Usaha Mikro, Kecil, dan Menengah (UMKM) dalam pengadaan pemerintah Indonesia. Platform ini mengharuskan penyedia jasa untuk memiliki dokumen administrasi formal, khususnya membedakan antara Nomor Identifikasi Usaha (NPWP) yang dikeluarkan melalui sistem OSS dan Nomor Identifikasi Wajib Pajak (NPWP), beserta akta pendirian dan dokumentasi perusahaan. Namun, hanya 32 persen dari 64,2 juta UMKM di Indonesia yang memiliki lisensi formal tersebut. Untuk menganalisis keselarasan persyaratan pendaftaran ini dengan kerangka hukum yang berlaku, penelitian ini menggunakan metode penelitian hukum empiris (pendekatan sosial-hukum) yang didukung oleh pendekatan hukum dan konseptual. Temuan menunjukkan bahwa prasyarat administratif yang ketat ini menimbulkan hambatan masuk yang parah dan konsentrasi pasar, menciptakan kondisi yang mendistorsi persaingan usaha yang adil sebagaimana diatur dalam Undang-Undang No. 5 Tahun 1999. Akibatnya, sejumlah kecil penyedia jasa terdaftar mendominasi transaksi pemerintah, yang mengakibatkan penetapan harga yang tidak adil, inefisiensi anggaran, dan potensi kerugian keuangan negara. Studi ini menyimpulkan bahwa harmonisasi regulasi melalui penyederhanaan persyaratan pendaftaran INAPROC dan program sosialisasi sistematis yang menargetkan UMKM merupakan langkah kebijakan penting untuk mengurangi konsentrasi pasar, memulihkan persaingan sehat, dan memastikan partisipasi inklusif dalam pengadaan pemerintah digital.

Kata Kunci: hambatan masuk pasar; E-Katalog Versi 6; persaingan adil; konsentrasi pasar; UMKM

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Introduction

The rapid advancement of information and communication technology has significantly transformed government procurement systems worldwide, shifting them toward more efficient, transparent, and accountable digital platforms. In Indonesia, this transformation is reflected in the increasing adoption of e-catalogue and e-marketplace systems, with over 10,000 registered products recorded by 2022 (Indonesia, 2022). This digital shift not only accelerates procurement processes but also enhances accountability and transparency, which are fundamental principles in state financial management. Furthermore, electronic commerce has generated economic, social, and cultural impacts by enabling micro, small, and medium enterprises (MSMEs) to access broader markets, altering consumer behavior, and reshaping societal interactions with products and brands (Anggraeni et al., 2026; Muhammad et al., 2026; Sifa et al., 2024).

To accelerate digital transformation in government procurement, the Indonesian government enacted Presidential Regulation No. 17 of 2023, mandating PT Telekomunikasi Indonesia Tbk to manage the Electronic Procurement System and its supporting infrastructure, encompassing funding, development, integration, operation, and maintenance (JDIH LKPP, 2023). The resulting platform, E-Katalog Version 6, was jointly developed by the National Public Procurement Policy Agency (LKPP) and Telkom Indonesia, and has been compulsory for all ministries, agencies, and regional governments since January 1, 2025 (Setyowati, 2025). This version introduces significant improvements over its predecessor, including direct payment methods, simplified application management, integration with the state financial system (SAKTI), enhanced procurement monitoring functions, and strengthened transaction security (Setyowati, 2025; Zahara & Elmizan, 2026).

Despite these advancements, the mandatory registration requirements for E-Katalog Version 6 present substantial barriers to MSME participation. All providers must obtain an INAPROC account, which requires verification of a Business Identification Number (NIB) through the Online Single Submission (OSS) system, along with articles of incorporation and other administrative documents (INAPROC, 2025; LKPP, 2024). However, of the 64.2 million MSMEs in Indonesia, only approximately 32% possess a valid NIB, meaning the majority cannot fulfill these prerequisites (Kementerian Koperasi dan UKM, 2024). The administrative complexity effectively excludes micro and small enterprises, which typically operate as home-based businesses without formal organizational structures, thereby contradicting the inclusivity principle enshrined in Presidential Regulation No. 16 of 2018 (JDIH LKPP, 2018).

The restriction of the eligible provider pool raises significant concerns regarding market concentration and the potential distortion of fair business competition. Empirical reports, including data from the Indonesian Employers Association (APINDO, 2024), indicate that a substantial portion of government procurement value is controlled by a limited number of large corporate providers. While a small number of registered providers does not automatically constitute a legal monopoly under competition law, such high market

concentration—driven by structural entry barriers—creates conditions that may lead to oligopolistic behavior, unfair pricing, and budget inefficiency. Consequently, this dynamic warrants scrutiny under the lens of Law No. 5 of 1999 concerning the Prohibition of Monopolistic Practices and Unfair Business Competition, particularly regarding whether these administrative prerequisites inadvertently create discriminatory barriers to entry (Article 19) for MSMEs.

Despite the extensive literature on the digital transformation of public procurement, a critical research gap remains. Previous studies have predominantly focused on the technical adaptation of e-procurement systems by government officials (Edi et al., 2025; Ramayanti, 2025) or the general efficiency of digital platforms (Bertocchi et al., 2022; Setyowati, 2025). However, there is a scarcity of empirical legal research that specifically examines the structural exclusion of MSMEs caused by the stringent administrative prerequisites of E-Katalog Version 6, and how this exclusion translates into market concentration and potential distortions of fair competition. This study aims to fill this gap by employing an empirical legal research method with a socio-legal approach. Specifically, the objectives of this research are to: (1) analyze the extent to which NIB and INAPROC account requirements function as structural barriers to entry for MSMEs; (2) evaluate the implications of the resulting market concentration on fair business competition under Law No. 5 of 1999; and (3) identify regulatory disharmonies between platform technicalities and MSME empowerment mandates. The novelty of this research lies in its integration of empirical field data on MSME exclusion with competition law analysis, providing a comprehensive legal and policy framework to redesign inclusive digital procurement.

Method

This study employs an empirical legal research method with a socio-legal approach. Unlike traditional normative research that focuses solely on "law in books," a socio-legal approach examines "law in action," analyzing how the formal regulations governing E-Katalog Version 6 interact with the socio-economic realities of MSMEs and market dynamics in practice. The research aims to evaluate the structural barriers created by INAPROC registration requirements and their implications for fair business competition under Law No. 5 of 1999. To achieve this, the study integrates statutory and conceptual approaches with empirical field data to provide a comprehensive legal and practical analysis.

Primary legal materials were collected through a comprehensive review of statutory regulations, including Law No. 5 of 1999 on the Prohibition of Monopolistic Practices and Unfair Business Competition, Presidential Regulation No. 16 of 2018 (as amended by Presidential Regulation No. 46 of 2025), Presidential Regulation No. 17 of 2023, and LKPP regulations regarding the implementation of E-Katalog Version 6. Secondary legal materials comprised academic journals, institutional reports, and literature on competition law and digital public procurement.

To capture the empirical reality, primary empirical data were collected through in-depth, semi-structured interviews and direct observation of the INAPROC system interface. The informants were selected using a purposive sampling technique, comprising four key categories of stakeholders directly involved in or affected by the E-Katalog Version 6 implementation: (1) MSME actors (specifically micro-enterprise owners who experienced administrative exclusion); (2) procurement officials at regional government agencies who execute the procurement process; (3) procurement policy makers involved in digital procurement governance; and (4) competition law scholars who provide expert perspectives on market concentration. The interviews were conducted between February and May 2026, both in person and via online platforms, lasting approximately 45 to 60 minutes per session. Additionally, empirical data on market concentration and MSME licensing statistics were gathered from institutional reports (e.g., the Ministry of Cooperatives and UKM, APINDO), and direct documentation of the INAPROC registration interface was captured through system screenshots to verify the technical barriers.

The data analysis was conducted using a qualitative interactive model that integrates both legal and empirical data. First, legal materials were interpreted using statutory and conceptual approaches to establish the normative framework and identify regulatory disharmonies. Second, the empirical data from interviews and field observations were transcribed, coded, and analyzed using thematic analysis to identify recurring patterns regarding administrative barriers and market concentration. Finally, a triangulation process was applied to cross-verify the empirical findings with the normative legal framework, ensuring that the practical realities observed in the field were accurately contextualized within the principles of fair business competition and MSME empowerment.

Results and Discussion

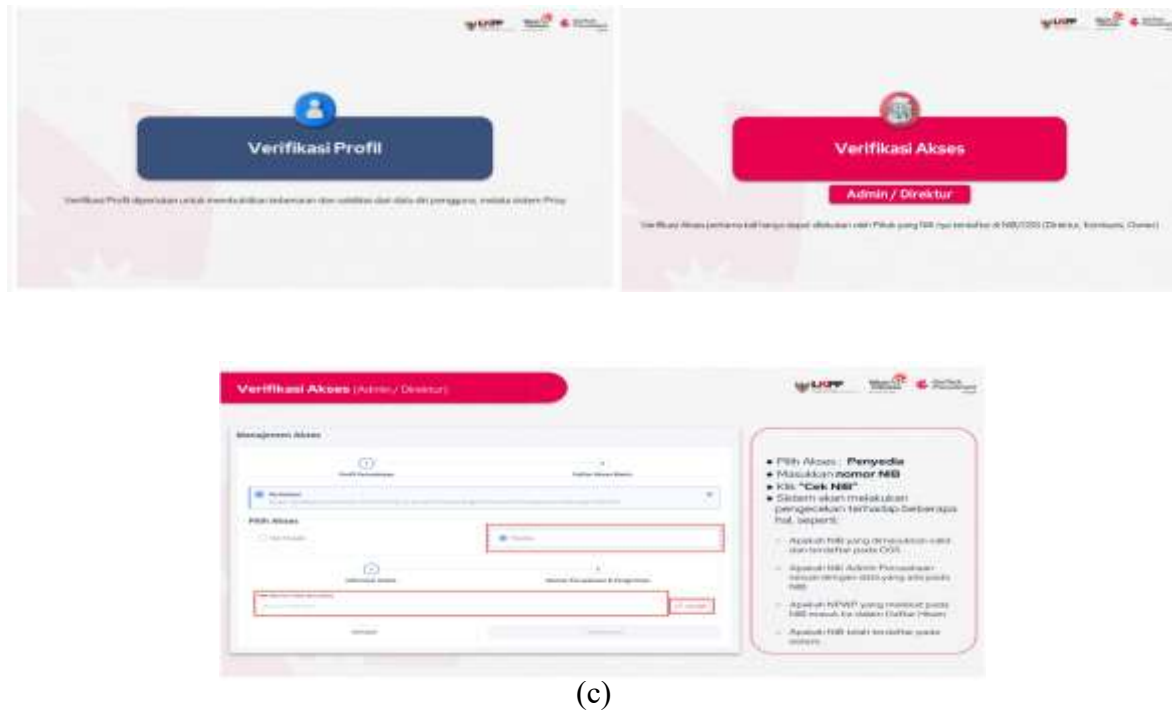
Administrative Entry Barriers and the Misalignment with the Legal Status of MSMEs

E-Katalog Version 6 positions the INAPROC account as the single gateway for business actors to participate in government procurement. The registration pathway obliges prospective providers to pass sequential verification stages, including identity validation, inputting a Business Identification Number (NIB), and uploading mandatory corporate documents such as the deed of establishment (*akta pendirian*).

This technical requirement reveals a critical misalignment with the legal status and classification of MSMEs under Indonesian law. Under Government Regulation (PP) No. 7 of 2021 concerning the Ease, Protection, and Empowerment of Cooperatives and MSMEs, a micro-enterprise is defined as a productive business owned by an individual or legal entity that meets the criteria of net assets of up to IDR 5 billion. Legally, for micro and small business actors operating as individual enterprises or informal household businesses, the NIB issued through the Online Single Submission (OSS) system serves as the sole legal identity and formal license. They are not legally mandated to possess a notarial deed of

establishment unless they are structured as a limited liability company (PT) or a formal partnership (CV).

Figure 1. (a) Stages of Profile Verification, (b) Access Verification, and (c) Company Data Verification for Prospective Providers in the INAPROC System



However, the INAPROC system interface (Figure 1) demonstrates that the platform implicitly assumes all providers possess a formal corporate structure. Field data gathered through interviews confirm that this technical design functions as a decisive structural barrier. A micro-enterprise owner in the catering sector stated: *"We have supplied food to the local government for ten years, but since this year we cannot enter the system because our business has no formal deed of establishment, even though our NIB is active."* Her testimony demonstrates that the platform converts a technical administrative glitch into an instrument of legal and economic exclusion, filtering out actors who are legally recognized as MSMEs but lack corporate formalities.

Table 1. Number of Business Identification Numbers (NIB) Issued through the OSS System in Indonesia, 2020–2024

Year of NIB Issuance	Number of NIBs Issued
2020	1,516,688
2021	2,165,386
2022	2,473,243
2023	4,061,883
2024	10,000,019
Cumulative total	20,217,219

Table 2. Structure of the MSME Population and Licensing Status in Indonesia, 2024

Category				Number of Units	Share (%)
Total MSME population				64,200,000	100
MSMEs holding an NIB (licensed)				20,217,219	32
MSMEs without an NIB (unlicensed)				43,982,781	68

Table 1 and Table 2 illustrate the macro-level impact of this barrier. While NIB issuance has surged to over 20 million (32% of the 64.2 million MSME population), the remaining 68% are structurally excluded. The data must be interpreted carefully: the exclusion is not merely due to a lack of NIB, but the compounding effect of additional corporate document requirements that are not legally required for micro-enterprises under PP 7/2021. Thus, the digital procurement architecture generates a severe entry barrier for the very demographic that Presidential Regulation No. 16 of 2018 mandates to be prioritized.

Market Concentration and Potential Distortions of Fair Business Competition

The restriction of the eligible provider pool fundamentally alters the market structure of government procurement, creating conditions that may lead to the distortion of fair business competition. Industry estimates and empirical observations indicate that a substantial portion of government procurement value is currently controlled by a limited number of large corporate providers who easily meet the stringent administrative prerequisites.

From a competition law perspective, this condition must be analyzed through the lens of Law No. 5 of 1999. While a small number of registered providers does not automatically constitute a legal monopoly, the platform's design creates structural barriers to entry as prohibited under Article 19 paragraph (1) letter b, which forbids business actors from obstructing other business actors from conducting business due to restrictive agreements or administrative barriers. Furthermore, the concentration of providers in specific catalogue categories grants them a dominant position as defined in Article 1 number 4, where an enterprise faces no meaningful competition.

A procurement official at a regional government agency confirmed this market distortion: *"In several catalogue categories, we only see two or three providers. The prices offered are often higher than prevailing market prices, and we have no realistic alternative to trigger the e-reverse auction mechanism."* This empirical finding indicates that the concentrated market structure neutralizes the competitive mechanism intended by the e-reverse auction. When barriers to entry are artificially high, incumbent providers can sustain supra-competitive pricing without the threat of new entrants. Consequently, this leads to budget inefficiency and potential state financial losses, not as a direct result of a proven monopolistic conspiracy, but as a structural consequence of an exclusionary digital platform design.

Regulatory Disharmony: The Conflict Between Technical Implementation and Statutory Mandates

Indonesian procurement regulations consistently affirm the principle of inclusivity. Presidential Regulation No. 16 of 2018 (as amended by No. 46 of 2025), Article 65, reserves procurement packages up to IDR 15 billion exclusively for MSMEs. Additionally, Presidential Instruction No. 2 of 2022 mandates a minimum 40% allocation of government expenditure through MSMEs.

However, the technical implementation of E-Katalog Version 6 creates a severe regulatory disharmony. In the hierarchy of laws, technical regulations issued by the National Public Procurement Policy Agency (LKPP) must not contradict superior legislation. By conditioning participation on corporate documents that the majority of MSMEs do not legally possess, the platform's terms and conditions effectively nullify the allocative mandates of the Presidential Regulations. A competition law scholar interviewed in this study noted: *"When a technical rule creates a barrier that only large firms can cross, the market structure becomes oligopolistic by design, regardless of the intention behind it."* This disharmony demonstrates a failure in regulatory alignment, where subordinate technical rules frustrate the statutory purpose of promoting broad-based economic growth and equitable development.

Policy Directions Grounded in Statutory Authority

To restore healthy competition, corrective measures must be grounded in clear legal authority. First, regulatory harmonization through the simplification of registration requirements. LKPP, under the authority granted by Presidential Regulation No. 17 of 2023, has the regulatory power to issue technical circulars and platform guidelines. LKPP must exercise this authority to introduce a tiered verification scheme, where micro-enterprises are only required to validate their NIB, waiving the requirement for corporate deeds. This aligns the platform's technical rules with the legal reality of MSMEs under PP 7/2021. Second, systematic socialization and assistance. This is not merely a social program but a legal obligation. Article 86 of Presidential Regulation No. 16 of 2018 mandates the government to empower MSMEs. Therefore, regional governments and LKPP must establish help desks and licensing facilitation programs, fulfilling their statutory duty to ensure MSMEs can access the digital procurement ecosystem.

Discussion

The findings of this study demonstrate that the digital transformation of public procurement in Indonesia, specifically through E-Katalog Version 6, has inadvertently created a socio-legal paradox. While prior studies have highlighted the technical adaptation challenges faced by government employees (Ahn & Chen, 2022; Edi et al., 2025; Elgohary & Abdelazyz, 2020; Fauzia et al., 2025; Glyptis et al., 2020; Ramayanti, 2025; Zahara & Elmizan, 2026), this research contributes a deeper legal analysis by proving that the barriers

are not merely technical glitches, but structural exclusions rooted in regulatory disharmony. The empirical data reveals that the platform's design conflicts with the legal status of MSMEs under PP 7/2021, transforming a digital efficiency tool into an instrument of economic exclusion.

Furthermore, this study advances the discourse on market concentration in the digital economy. Previous scholarship on e-commerce has noted that digital platforms tend to concentrate market power among dominant actors (Calvano & Polo, 2021; Huang et al., 2020; Kumar et al., 2026; Pakaya et al., 2026; Sudirman et al., 2025; Wicaksono, 2025). However, this research provides a novel legal contribution by linking this concentration directly to public procurement regulations. It proves that state-mandated digital platforms can inadvertently violate the principles of fair business competition under Law No. 5 of 1999 by creating structural barriers to entry (Article 19). Unlike private e-commerce platforms where market dominance is a result of business strategy, the dominance in E-Katalog Version 6 is structurally engineered by administrative prerequisites that contradict superior empowerment mandates.

While some literature portrays E-Katalog Version 6 as a new era of transparent and efficient procurement (Bertocchi et al., 2022; Setyowati, 2025; Styrin et al., 2026), this study's socio-legal approach offers a critical counter-narrative. The efficiency and transparency gains highlighted by these studies are realized exclusively within a closed ecosystem of already-registered, formally structured providers. The structural exclusion of 68% of the MSME population remains unaddressed. Therefore, this research concludes that platform sophistication cannot ensure equitable participation without concurrent reform of entry requirements to align with the legal realities of the target beneficiaries.

Ultimately, the regulatory disharmony identified in this study reflects a broader pattern in Indonesian digital economic governance, where market liberalization and technical efficiency objectives often overshadow protective measures for smaller enterprises (Ariawan, 2025; Mujib, 2025). The policy recommendations advanced here—tiered verification and statutory-based assistance—resonate with the adaptive support mechanisms emphasized in prior research (Adaptasi et al., 2026; Fayezi & Zomorodi, 2025; Malodia et al., 2021; Rasaei, 2026). However, this study elevates these recommendations from mere administrative suggestions to legal imperatives necessary to cure regulatory disharmony and prevent potential violations of competition law.

Conclusion

The acceleration of digital transformation in government procurement, marked by the mandatory implementation of E-Katalog Version 6 integrated with INAPROC since January 1, 2025, has inadvertently created structural barriers to MSME participation. The platform's registration requirements—including a Business Identification Number (NIB), deed of establishment, and corporate documentation—effectively exclude the majority of micro and small enterprises, as only 32 per cent of Indonesia's 64.2 million MSMEs possess

formal licensing. This restricted provider pool generates conditions conducive to monopolistic practices, where a limited number of registered enterprises dominate government transactions, resulting in unfair pricing, stagnation in product quality and innovation, budget inefficiency, and potential state financial losses. The findings confirm that the platform's administrative prerequisites, while ostensibly neutral, constitute a form of discrimination against particular categories of business actors, contradicting both the inclusivity mandate of Presidential Regulation No. 16 of 2018 and the prohibition of monopolistic practices under Law No. 5 of 1999.

To restore healthy competition in digital government procurement, the government must pursue two complementary policy measures: regulatory harmonization and targeted socialization with assistance for MSMEs. Regulatory harmonization requires the simplification and differentiation of INAPROC registration requirements so that micro-enterprises are not subjected to the same administrative burdens as large corporations, thereby aligning platform rules with the empowerment mandates embedded in superior legislation. Simultaneously, systematic socialization and capacity-building programmes must be directed specifically at MSMEs facing limitations in infrastructure, information, and human resources, enabling them to navigate the digital procurement ecosystem. When these measures are implemented, the enlarged provider pool will restore genuine competition, drive prices downward through mechanisms such as e-reverse auction, and ultimately transform E-Katalog Version 6 from a potentially monopolistic marketplace into an inclusive instrument of equitable economic development.

Statement of the Use of Artificial Intelligence (AI)

This article did not use Artificial Intelligence (AI) assistance.

Author Contribution Statement

Taufani Yunithia Putri conceptualized the research, conducted the normative legal analysis, collected and analyzed primary and secondary legal materials, and drafted the original manuscript. Muslim Nugraha supervised the research design, verified the analytical framework, critically reviewed and revised the manuscript for intellectual content, and approved the final version for submission. Both authors have read, discussed, and agreed to the published version of the manuscript.

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Conflict of interest

The authors declare no conflict of interest.

References

- Adaptasi, D., Pada, P., Barang, P., Pemerintah, J., Zahara, A., & Elmizan, G. H. (2026). Efektivitas Penggunaan E-Katalog V6 (INAPROG) Ditinjau Dari Adaptasi Pegawai Pada Pengadaan Barang/Jasa Pemerintah. *RIGGS: Journal of Artificial Intelligence and Digital Business*, 5(1), 11773–11782. <https://doi.org/10.31004/riggs.v5i1.7767>
- Ahn, M. J., & Chen, Y. C. (2022). Digital transformation toward AI-augmented public administration: The perception of government employees and the willingness to use AI in government. *Government Information Quarterly*, 39(2), 101664. <https://doi.org/10.1016/J.GIQ.2021.101664>
- Anggraeni, L., Zulgani, Hodijah, S., & Umiyati, E. (2026). Unlocking Inclusive Growth: The Mediating Role of E-Commerce in MSME Digitalization for Economic Development and SDGs' Achievement in Jambi Province, Indonesia. *Economies*, 14(2), 44. <https://doi.org/10.3390/ECONOMIES14020044/S1>
- Ariawan. (2025). Regulatory Barriers to Consumer Protection in Digital Marketplaces. *Journal of Human Rights, Culture and Legal System*, 5(3), 806–832. <https://doi.org/10.53955/JHCLS.V5I3.782>
- Bertocchi, E., Caroli, M., Casalino, N., Falà, S., Giovannetti, M., Infante, K., Orsi, A., Mariotti, E., Massimi, F., Manzo, V., Pizzolo, G., & Sellitto, G. P. (2022). Accelerating Transparency and Efficiency in the Public Procurement Sector for a Smarter Society: eNotification and ESPD Integration for Developing E-procurement. *Smart Innovation, Systems and Technologies*, 305 SIST, 269–287. https://doi.org/10.1007/978-981-19-3112-3_25/SAVE-RESEARCH
- Calvano, E., & Polo, M. (2021). Market power, competition and innovation in digital markets: A survey. *Information Economics and Policy*, 54, 100853. <https://doi.org/10.1016/J.INFOECOPOL.2020.100853>
- Edi, S., Mustofa, A., & Albab, U. (2025). Evaluating the Effectiveness of E-Catalog Utilization in Improving Procurement Quality Through Accessibility, Deviation Control, and Transparency. *Jembatan Hukum : Kajian Ilmu Hukum, Sosial Dan Administrasi Negara*, 2(3), 106–118. <https://doi.org/10.62383/JEMBATAN.V2I3.2278>
- Elgohary, E., & Abdelazyz, R. (2020). The impact of employees' resistance to change on implementing e-government systems: An empirical study in Egypt. *Electronic Journal of Information Systems in Developing Countries*, 86(6), e12139. <https://doi.org/10.1002/ISD2.12139;PAGEGROUP:STRING:PUBLICATION>
- Fauzia, M., Surahman, N. P., Rizki, M. N., Tri, P., Laia, I., & Laia, T. P. (2025). The Effect of Employee Adaptation and Government Capacity on the Success of the Regional Government Information System (SIPD). *Proceedings of The International Conference on Computer Science, Engineering, Social Science, and Multi-Disciplinary Studies*, 1, 488–494. <https://doi.org/10.64803/CESSMUDS.V1.97>

- Fayezi, S., & Zomorodi, M. (2025). Navigating the multiplicity of sustainability policies in agribusiness supply networks: The role of policy brokers and advocates. *Food Policy*, 136, 102973. <https://doi.org/10.1016/J.FOODPOL.2025.102973>
- Glyptis, L., Christofi, M., Vrontis, D., Giudice, M. Del, Dimitriou, S., & Michael, P. (2020). E-Government implementation challenges in small countries: The project manager's perspective. *Technological Forecasting and Social Change*, 152, 119880. <https://doi.org/10.1016/J.TECHFORE.2019.119880>
- Huang, Y., Hui, E. C. M., Zhou, J., Lang, W., Chen, T., & Li, X. (2020). Rural Revitalization in China: Land-Use Optimization through the Practice of Place-making. *Land Use Policy*, 97, 104788. <https://doi.org/10.1016/J.LANDUSEPOL.2020.104788>
- INAPROC. (2025). *Syarat dan Ketentuan Katalog Elektronik Versi 6 (Versi 1.4)*. https://bantuan.inaproc.id/hc/id-id/articles/10157833668111-Syarat-dan-Ketentuan-Katalog-Elektronik-Versi-6-Versi-1-4#h_01JHPZBTVR2ZH57K7DNVMJWX1E
- Indonesia, K. K. R. (2022). *Laporan Tahunan Pengadaan Barang Dan Jasa*. Kementerian Keuangan Republik Indonesia.
- Kumar, R., Jaiswal, R., Chandel, P. S., Parashar, A., Agarwal, P., & Amita. (2026). Digital Media and Ethical Storytelling in Spiritual Travel: Navigating Authenticity in a Globalised World. *A Guidebook to Ethical Spiritual Travel*, 3–38. <https://doi.org/10.1108/978-1-80686-013-520261002>
- LKPP. (2024). *Surat Edaran Kepala Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah Nomor 9 Tahun 2024 Tentang Implementasi Katalog Elektronik Versi 6*. Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah.
- Malodia, S., Dhir, A., Mishra, M., & Bhatti, Z. A. (2021). Future of e-Government: An integrated conceptual framework. *Technological Forecasting and Social Change*, 173, 121102. <https://doi.org/10.1016/J.TECHFORE.2021.121102>
- Muhammad, A. S., Adalier, A., & Isiaku, L. (2026). Driving digital transformation: a systematic review of social commerce adoption by SMEs in developing countries. *Global Knowledge, Memory and Communication*, 1–22. <https://doi.org/10.1108/GKMC-02-2025-0163/1353062>
- Mujib, A. (2025). The Failure of Indonesian E-commerce Law in Adapting to Digital Economy. *Ijtihad : Jurnal Wacana Hukum Islam Dan Kemanusiaan*, 25(2), 213–230. <https://doi.org/10.18326/IJTIHAD.V25I2.213-230>
- Pakaya, S. M., Kartika, I. T., Mursalim, M. A., & Thomas, A. W. (2026). The role of digital MSMEs in achieving the SDGs: inclusivity, inequality of access, and platform market dominance in Indonesia. *SOSIOHUMANIORA: Jurnal Ilmiah Ilmu Sosial Dan Humaniora*, 12(1). <https://doi.org/https://doi.org/10.30738/sosio.v12i1.20837>
- Peraturan Presiden Nomor 16 Tahun 2018 Tentang Pengadaan Barang/Jasa Pemerintah (2018). <https://jdih.lkpp.go.id/regulation/peraturan-presiden/peraturan-presiden-nomor-16-tahun-2018>

- Peraturan Presiden Nomor 17 Tahun 2023 Tentang Percepatan Transformasi Digital Di Bidang Pengadaan Barang/Jasa Pemerintah (2023). <https://jdih.lkpp.go.id/regulation/peraturan-presiden/peraturan-presiden-nomor-17-tahun-2023>
- Ramayanti, D. (2025). Pengadaan Digital sebagai Instrumen Kebijakan: Studi Implementasi e-Katalog V6 pada Pemerintah Daerah Prespektif Maqashid Syariah. *MANARUL ILMI : Journal of Islamic Studies*, 1(2). <https://journal.manarulilmi.org/index.php/jis/article/view/150>
- Rasaei, J. (2026). Sustainability and regulatory compliance in management control systems: insights from Germany's Supply Chain Due Diligence Act. *Sustainability Accounting, Management and Policy Journal*, 17(7), 1–25. <https://doi.org/10.1108/SAMPJ-01-2025-0126>
- Setyowati, Y. I. (2025). *Mengenal katalog elektronik versi 6: Era baru pengadaan barang/jasa pemerintah yang transparan & efisien*. Direktorat Jenderal Perbendaharaan. <https://djp.kemenkeu.go.id/kppn/cirebon/id/data-publikasi/artikel/2955>
- Sifa, A., Masruroh, I., Zulfa, M. A., Fitriani, S. N., & Aprianto, N. E. K. (2024). Transformasi Digital E-Commerce Dalam Menguasai Kosentrasi Pasar di Indonesia. *JURNAL ILMIAH EKONOMI DAN MANAJEMEN*, 2(12), 405–413. <https://doi.org/10.61722/jiem.v2i12.3239>
- Styrin, E., Sanina, A., Ataeva, A., & Rodionova, Y. (2026). Public Procurement as a Platform: An Ecosystem Capability Framework. *Public Administration and Development*. <https://doi.org/10.1002/PAD.70092;CTYPE:STRING:JOURNAL>
- Sudirman, L., Sohngeng, N., Agustianto, Agustini, S., & Nurlaily. (2025). Legal protections against unfair competition in ecommerce: Analysis of Indonesian and Thailand framework adequacy. *Jurnal Hukum Novelty (1412-6834)*, 16(1), 27.
- Wicaksono, R. A. (2025). E-Commerce Market Saturation in Indonesia: The Dynamics of Price Competition from Islamic Economic Perspective. *Jurnal Ekonomika Dan Bisnis Islam*, 8(1), 1–19. <https://doi.org/10.26740/JEKOB.I.V8N1.P1-19>
- Zahara, A., & Elmizan, G. H. (2026). Efektivitas Penggunaan E-Katalog V6 (INAPROC) Ditinjau dari Adaptasi Pegawai Pada Pengadaan Barang/Jasa Pemerintah. *Journal of Artificial Intelligence and Digital Business (RIGGS)*, 5(1), 11773–11782. <https://doi.org/10.31004/riggs.v5i1.7767>