

THE INFLUENCE OF E-CATALOG EFFECTIVENESS, TENDER INFORMATION, AND PRICE DETERMINATION ON CONSTRUCTION PROCUREMENT SERVICES IN THE CITY OF TANGERANG

Cucu Sudrajat¹, Esaka Pratata², Yudi Nur Supriyadi³, Asep Sugara⁴

^{1,2,4}Universitas Yuppentek Indonesia

³Universitas Veteran Pembangunan Jakarta'

Email: yudinursupriyadi@upnvj.ac.id

ABSTRACT

This study examines a public administration issue concerning the effectiveness of the e-catalog system, tender information, and price determination in improving construction procurement services in Tangerang. The research aims to analyze the influence of e-catalog effectiveness, tender information, and price determination on construction procurement services. A quantitative approach was employed involving construction service providers in Tangerang using a saturated sampling technique. The collected data were analyzed using multiple regression analysis and the coefficient of determination to test the proposed hypotheses. The findings reveal that e-catalog effectiveness does not have a significant effect on construction procurement services, whereas tender information and price determination demonstrate significant positive effects. Simultaneously, all independent variables significantly influence construction procurement services. However, effective implementation depends not only on statistical significance but also on technical readiness, adaptive regulatory support, and adequate dissemination among construction service providers.

Keywords: E-catalog effectiveness, tender information, price determination, construction procurement services.

ABSTRAK

Penelitian ini mengkaji isu administrasi publik terkait efektivitas sistem e-katalog, informasi tender, dan penetapan harga dalam meningkatkan layanan pengadaan konstruksi di Tangerang. Penelitian ini bertujuan untuk menganalisis pengaruh efektivitas e-katalog, informasi tender, dan penetapan harga terhadap layanan pengadaan konstruksi. Pendekatan kuantitatif digunakan dengan melibatkan penyedia jasa konstruksi di Tangerang menggunakan teknik pengambilan sampel jenuh. Data yang dikumpulkan dianalisis menggunakan analisis regresi berganda dan koefisien determinasi untuk menguji hipotesis yang diajukan. Temuan penelitian menunjukkan bahwa efektivitas e-katalog tidak memiliki pengaruh yang signifikan terhadap layanan pengadaan konstruksi, sedangkan informasi tender dan penetapan harga menunjukkan pengaruh positif yang signifikan. Secara bersamaan, semua variabel independen secara signifikan memengaruhi layanan pengadaan konstruksi. Namun, implementasi yang efektif tidak hanya bergantung pada signifikansi statistik, tetapi juga pada kesiapan teknis, dukungan regulasi yang adaptif, serta penyebaran informasi yang memadai di kalangan penyedia jasa konstruksi.

Kata kunci: Efektivitas e-katalog, informasi tender, penetapan harga, layanan pengadaan konstruksi

PENDAHULUAN

Public procurement is a strategic component of public administration because it directly affects government efficiency, service quality, and infrastructure development outcomes. In Indonesia, procurement reform has increasingly focused on digital transformation through electronic government systems to improve transparency, accountability, and administrative efficiency. One important innovation in this area is the implementation of the electronic catalog (e-catalog), which enables government institutions to conduct procurement through a more transparent and standardized digital platform (OECD, 2019).

The implementation of e-catalog is particularly important in the construction sector, where procurement effectiveness directly influences infrastructure delivery and public service outcomes. In Tangerang, the local government has adopted the e-catalog system to support construction procurement. According to data from the Housing, Settlement, and Land Office of (Tangerang City, 2025), 40 construction procurement packages with a total budget allocation exceeding IDR 33.9 billion were offered through the local e-catalog system, covering building construction and rehabilitation projects. This indicates the increasing strategic importance of digital procurement in supporting local infrastructure development.

Despite these developments, several implementation challenges remain. Construction service providers continue to face difficulties in adapting to digital procurement requirements, including limited understanding of procurement regulations, inadequate access to tender information, and concerns regarding fairness and competitiveness in the procurement process. These challenges are particularly relevant because approximately 81% of construction service providers in Tangerang are classified as small-scale enterprises, which often have limited financial and technological capacity.

In addition to e-catalog effectiveness, tender information and price determination are important factors influencing procurement service quality. Transparent tender information can improve participation and fair competition, while appropriate price determination supports budget efficiency and project feasibility (Erridge *et al*, 2022). However, limited empirical studies have examined how these variables simultaneously influence construction procurement

services at the local government level. Therefore, this study aims to analyze the influence of e-catalog effectiveness, tender information, and price determination on construction procurement services in Tangerang.

LITERATURE REVIEW

E-Catalog Effectiveness

The effectiveness of an electronic catalog (e-catalog) reflects the extent to which a digital procurement system achieves its intended objectives in improving efficiency, transparency, and accountability in public procurement processes. Within the context of public sector digital transformation, an effective e-catalog system is expected to simplify administrative procedures, reduce procurement time, and provide equal access to procurement opportunities for all service providers. According to Campbell, as cited in (Mahmudi, 2019), organizational effectiveness can be measured through five principal dimensions: program success, target achievement, user satisfaction, input-output effectiveness, and overall goal attainment. Applied to this study, these indicators are relevant in evaluating whether the e-catalog system has successfully supported construction procurement services in Tangerang. From a theoretical perspective, the effectiveness of e-catalog implementation is closely associated with the principles of e-government, which emphasize transparency, administrative simplification, and service innovation in public institutions. Therefore, greater e-catalog effectiveness is expected to positively influence procurement service quality.

Tender Information

Access to accurate and timely tender information is a critical determinant of procurement transparency and market competitiveness. In public procurement systems, the availability of reliable information enables service providers to make informed decisions, prepare competitive bids, and participate fairly in procurement processes. According to Venkatesh, Viswanath and Davis, Fred D., as cited in (Suryanto, 2015), information quality can be assessed through three key indicators: up-to-date information, consistency, and ease of understanding. These dimensions are particularly relevant in digital procurement

environments, where delays or ambiguity in information dissemination may reduce participation and weaken trust in the procurement system. In this study, tender information is conceptualized as the extent to which procurement-related information is accessible, accurate, and understandable to construction service providers.

Price Determination

Price determination represents a crucial component of public procurement, particularly in construction projects where financial accuracy directly affects project feasibility and budget efficiency. A transparent and rational pricing mechanism helps ensure fairness among bidders while reducing the risk of procurement inefficiencies. Based on (Rizki et al., 2023), price determination in procurement can be evaluated through several indicators, including local market prices, official government price references, professional association price standards, online market information, inflation trends, exchange rates, and comparative contract prices. These indicators demonstrate that pricing decisions in public procurement should not rely solely on market assumptions but should be based on objective, measurable, and transparent financial considerations. Consequently, effective price determination is expected to improve procurement outcomes and service quality.

Construction Procurement Services

Construction procurement services refer to the quality of public services delivered during the procurement process, particularly in relation to transparency, accountability, and fairness. In public administration, service quality is often evaluated based on fundamental public service principles. According to (Poltak, 2019), public service performance can be measured through six dimensions: transparency, accountability, conditionality, participation, equality of rights, and balance between rights and obligations. In the context of construction procurement, these dimensions reflect how effectively government institutions deliver procurement services to service providers while ensuring fairness, legal compliance, and responsiveness to stakeholder needs.

CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Based on the theoretical framework above, this study assumes that e-catalog effectiveness, tender information, and price determination are important determinants of construction procurement service quality. A more effective e-catalog system is expected to improve service accessibility and administrative efficiency. Similarly, transparent tender information can increase provider participation and trust, while appropriate price determination supports fairness and budget efficiency. Therefore, this study proposes that e-catalog effectiveness, tender information, and price determination significantly influence construction procurement services in Tangerang.

METHODOLOGY

This study employed a quantitative research design to examine the influence of e-catalog effectiveness, tender information, and price determination on construction procurement services in Tangerang. The study population consisted of 99 individuals, including 75 construction service providers registered with Gapensi Tangerang and 24 employees from the Housing, Settlement, and Land Office of Tangerang City involved in managing the local construction e-catalog system. Using a saturated sampling technique, this study focused on 75 construction service providers as the research respondents. Data were collected through a structured questionnaire based on a five-point Likert scale, supported by field observation and literature review.

The research variables consisted of e-catalog effectiveness, tender information, price determination, and construction procurement services, each measured using established indicators adapted from previous studies. Prior to hypothesis testing, the research instrument was evaluated through validity and reliability testing to ensure data quality. Classical assumption tests, including normality and linearity tests, were also conducted. The collected data were then analyzed using inferential statistical methods, specifically multiple linear

regression and coefficient of determination analysis, to assess both the partial and simultaneous effects of the independent variables on construction procurement services at a significance level of 0.05.

RESULTS AND DISCUSSION

The Effect of E-Catalog Effectiveness on Construction Procurement Services

The regression analysis showed that e-catalog effectiveness produced a regression coefficient of 0.058 with a significance value of 0.329 (>0.05), indicating that its effect on construction procurement services was statistically insignificant. Therefore, the first hypothesis was rejected, meaning that e-catalog effectiveness does not significantly influence construction procurement services in Tangerang. This finding suggests that although the e-catalog system has been implemented as part of procurement digitalization, its direct contribution to service quality remains limited.

This condition may be explained by several contextual factors, including limited understanding among construction service providers, insufficient technical readiness, and inadequate dissemination of procurement procedures. Small-scale providers, which dominate the construction sector in Tangerang, often experience administrative and technological barriers when using digital procurement systems. These findings are consistent with (Sihaloho et al., 2024), who found that the effectiveness of e-catalog implementation remains constrained by users' limited understanding and readiness. Similarly, (Rohma, 2023) emphasized that the success of digital procurement systems depends heavily on supporting infrastructure and human resource capability.

However, this finding differs from (Nurdin, 2024), who reported that effective e-catalog implementation can significantly improve procurement efficiency when supported by integrated systems and policy incentives. This indicates that the impact of e-catalog effectiveness depends not only on system availability but also on institutional support, technical accessibility, and continuous user training.

The Effect of Tender Information on Construction Procurement Services

The analysis revealed that tender information had a regression coefficient of 0.471 with a significance value of 0.000 (<0.05), indicating a significant positive effect on construction procurement services. Therefore, the second hypothesis was accepted. This result confirms that transparent, accessible, and timely tender information significantly improves procurement service quality in Tangerang.

Clear and reliable tender information enables service providers to prepare administrative documents more effectively and increases their willingness to participate in procurement processes. This finding supports (Handoko, A., 2024), who found that real-time and structured tender information increases provider participation. Likewise, (Santoso, 2023) reported that limited access to tender information often reduces competitiveness and delays procurement outcomes.

Furthermore, (Prasetyo, 2024) highlighted that transparent tender information contributes to reducing corruption risks by ensuring equal access to procurement opportunities. Although (Nugroho, 2023) argued that technical capacity and administrative requirements also affect procurement performance, the present study confirms that tender information remains the most influential variable in improving procurement services.

The Effect of Price Determination on Construction Procurement Services

The regression results showed that price determination had a coefficient of 0.414 with a significance value of 0.000 (<0.05), indicating a significant positive effect on construction procurement services. Therefore, the third hypothesis was accepted. This finding demonstrates that transparent and market-based price determination contributes significantly to improving procurement service quality.

A clear pricing mechanism increases trust among construction service providers because it reduces concerns regarding price manipulation and improves perceptions of fairness in procurement decisions. This finding is consistent with (Mulyono & Setiawan, 2024), who emphasized that transparent pricing directly improves procurement efficiency and provider participation. (Kartika, 2023) also noted that flexible pricing mechanisms can encourage broader market participation, especially among new service providers.

Nevertheless, (Wijayanto, 2024) argued that pricing alone is insufficient if service quality does not align with procurement expectations. Similarly, (Rachman & Dewi, 2023) found that administrative efficiency and budget disbursement speed may also influence procurement performance. Therefore, while price determination significantly affects procurement services, it should be supported by broader procedural improvements.

The Simultaneous Effect of E-Catalog Effectiveness, Tender Information, and Price Determination on Construction Procurement Services

The simultaneous regression analysis demonstrated that e-catalog effectiveness, tender information, and price determination collectively had a significant effect on construction procurement services, with an F-value of 123.319 and a significance value of 0.000 (<0.05). Therefore, the fourth hypothesis was accepted. This confirms that the three independent variables jointly contribute to explaining variations in construction procurement service performance in Tangerang.

Among the three variables, tender information emerged as the strongest predictor, followed by price determination, while e-catalog effectiveness remained statistically insignificant in the partial test. This indicates that improving procurement service quality requires stronger emphasis on information transparency and pricing mechanisms, alongside continued improvement of digital procurement systems.

These findings support (Santoso, 2023), who argued that procurement effectiveness depends on the integration of transparent information, efficient digital systems, and clear pricing mechanisms. Similarly, (Wijayanti & Hidayat, 2023) emphasized that procurement quality improves when pricing policies are realistic and procurement information is openly accessible. However, (Pradana, 2024) noted that technological systems alone do not guarantee better outcomes, especially where users face technical resistance or limited digital literacy. Therefore, although the statistical findings confirm significant simultaneous effects, practical implementation still depends on technical readiness, adaptive regulations, and continuous socialization among construction service providers.

CONCLUSION

This study concludes that tender information and price determination have significant positive effects on construction procurement services in Tangerang, indicating that transparency, accessibility of procurement information, and fair pricing mechanisms are critical factors in improving procurement service quality. In contrast, e-catalog effectiveness was found to have no significant partial effect, suggesting that the existence of a digital procurement platform alone is insufficient to improve service performance without adequate user readiness, technical capability, and institutional support. However, when analyzed simultaneously, e-catalog effectiveness, tender information, and price determination collectively demonstrated a significant influence on construction procurement services, confirming that an integrated procurement system remains essential for achieving better service outcomes. These findings imply that the Government of Tangerang City should strengthen digital infrastructure, improve continuous technical assistance for construction service providers, enhance transparency in tender information, and develop more adaptive pricing policies. Future studies are recommended to explore additional institutional and behavioral factors that may influence the effectiveness of digital construction procurement systems in broader regional contexts.

REFERENCES

- Dinas Perumahan Permukiman dan Pertanahan Kota Tangerang. (2025). *Paket Kegiatan pada E-katalog Pengadaan Jasa Kontruksi Kota Tangerang*.
- Erridge, Andrew., & Greer, J. (2022). Partnerships and public procurement: Building social capital through supply relations. *Public Administration*, 80(3), 503–522.
- Handoko, A. (2024). Akses Informasi Lelang dan Partisipasi Penyedia Jasa. *Jurnal Administrasi Negara*, 8(1), 33–47.
- Kartika, T. (2023). Fleksibilitas Harga dalam Sistem Pengadaan Konstruksi. *Jurnal Infrastruktur Publik*, 11(1), 78–92.
- Mahmudi. (2019). *Manajemen Kinerja Sektor Publik Edisi Ke 3 (Kedua)*. UPP STIM YKPN.
- Mulyono, R., & Setiawan, H. (2024). Dampak Transparansi Penetapan Harga terhadap Efisiensi Proyek. *Jurnal Teknik Sipil*, 14(2), 130–145.
- Nugroho, R. (2023). Hambatan dalam Implementasi Informasi Lelang: Perspektif Penyedia Jasa. *Jurnal Ekonomi Dan Pembangunan*, 9(2), 72–88.
- Nurdin, H. (2024). Keberhasilan Implementasi E-Katalog di Pemerintahan Daerah. *Jurnal Kebijakan Publik*, 15(1), 34–50.

- OECD. (2019). *Government at a Glance 2019*. <https://doi.org/https://doi.org/10.1787/8ccf5c38-en>
- Poltak, S. L. (2019). *Reformasi Pelayanan Publik (Teori, Kebijakan, dan Implementasi)*. Bumi Aksara.
- Pradana, W. (2024). Kendala Teknis dalam Implementasi Sistem Pengadaan Digital. *Jurnal Manajemen Infrastruktur*, 13(1), 60–75.
- Prasetyo, T. (2024). Peran Transparansi Lelang dalam Mencegah Korupsi. *Jurnal Ilmu Pemerintahan*, 9(2), 100–115.
- Rachman, D., & Dewi, F. (2023). Efisiensi Administrasi dalam Pengadaan Barang dan Jasa: Studi Kasus di Indonesia. *Jurnal Manajemen Publik*, 10(3), 130–145.
- Rizki, A., Handayani, D. I., & ... (2023). Analysis of Self-Estimated Pricing (HPS) in the Procurement Department Units 1&2 PT. PJB UP Paiton. *Prozima*, 7(1), 59–72.
- Rohma, F. F. (2023). Efektivitas Informasi dan Komunikasi dalam Memitigasi Tendensi Kecurangan Pengadaan Barang dan Jasa. *Jurnal Akuntansi Dan Keuangan*, 12(1), 1. <https://doi.org/10.36080/jak.v12i1.2101>
- Santoso, B., W. (2023). Kendala Penyedia Jasa dalam Mengakses Informasi Lelang. *Jurnal Infrastruktur Dan Pembangunan*, 14(2), 56–70.
- Sihaloho, S. W., Ariza, D., & Munandar, A. (2024). Efektifitas E-Katalog Pada Kegiatan Pengadaan Barang Dan Jasa (Pbj) Dalam Upaya Pemerintah Mencegah Fraud. *SCIENTIFIC JOURNAL OF REFLECTION: Economic, Accounting, Management and Business*, 7(1), 219–230. <https://doi.org/10.37481/sjr.v7i1.798>
- Suryanto. (2015). *Pengantar Ilmu Komunikasi*. Pustaka Setia.
- Wijayanti, A., & Hidayat, T. (2023). Analisis Kegagalan Pengadaan Konstruksi: Studi Kasus di Pemerintah Daerah. *Jurnal Kebijakan Publik*, 15(2), 45–60.
- Wijayanto. (2024). Analisis Ketidakseimbangan Harga dan Kualitas dalam Proses Pengadaan Konstruksi. *Jurnal Ekonomi Pembangunan*, 12(1), 90–105.