Verdad y Derecho
Revista Arbitrada de Ciencias Jurídicas y Sociales
Vol. 5(3), 1-14, 2026
https://doi.org/10.62574/3beiog3z

Indications of Disproportionate Technical Requirements and Supplier Participation in Electronic Reverse Auctions in Ecuador, 2024-2025

Indicios de exigencias técnicas desproporcionadas y concurrencia de proveedores en subasta inversa electrónica, Ecuador 2024-2025

Jenniffer Stefania Palma Sabando
jspalma@ube.edu.ec
Universidad Bolivariana del Ecuador, Durán, Guayas, Ecuador
https://orcid.org/0009-0003-0881-7090

Roberto Eduardo Vargas Zambrano
revargasz@ube.edu.ec
Universidad Bolivariana del Ecuador, Durán, Guayas, Ecuador
https://orcid.org/0009-0000-5937-4582

Acelia Fiorella Rossi Trigoso
afrossit@ube.edu.ec
Universidad Bolivariana del Ecuador, Durán, Guayas, Ecuador
https://orcid.org/0009-0001-3461-9966

ABSTRACT

Electronic reverse auctions account for about one fifth of the value awarded through Ecuadorian public procurement, since in 2024 and 2025 they mobilized USD 3,298.9 million, although a relevant share was settled through negotiation with a single supplier. The study therefore set out to characterize the registry-based and perceived signals of possibly disproportionate technical requirements and their relationship with supplier participation. A mixed, descriptive and non-experimental design was applied, using official data from Contratación Pública EnCifras, a matrix of 400 procedures and a survey of 30 suppliers. The results show that single-supplier negotiation represented 39.6% and 33.1% of the annual awarded value, that 119 procedures in the matrix were declared void and that 89.7% of respondents had at some point withdrawn because of restrictive requirements. The study concludes that clear, justified specifications open to equivalents favor bidding.

Descriptors: public expenditure; economic competition; public administration; public sector; public law. (Source: UNESCO Thesaurus).

RESUMEN

La subasta inversa electrónica concentra cerca de una quinta parte del valor adjudicado por la contratación pública ecuatoriana, por cuanto en 2024 y 2025 movilizó USD 3.298,9 millones, aunque parte de ese valor se negoció con un único proveedor. Es así que el estudio se planteó como objetivo caracterizar las señales de posibles exigencias técnicas desproporcionadas y su relación con la concurrencia de proveedores. En este sentido se empleó un diseño mixto, descriptivo y no experimental con datos de Contratación Pública EnCifras, una matriz de 400 procesos y una encuesta a 30 proveedores. Entre los resultados se obtuvo que la negociación con proveedor único representó el 39,6 % y el 33,1 % del valor adjudicado, que 119 procesos quedaron desiertos y que el 89,7 % de los encuestados desistió alguna vez por requisitos restrictivos. Entre las conclusiones se estableció que especificaciones claras, motivadas y abiertas a equivalencias favorecen la puja.

Descriptores: gasto público; competencia económica; administración pública; sector público; derecho público. (Fuente: Tesauro UNESCO).

Received: 18/9/2026. Reviewed: 22/10/2026. Accepted: 10/11/2026. Published: 13/11/2026.
Research Articles Section

INTRODUCTION

How much public money is awarded in Ecuador without a bidding contest among suppliers ever taking place? The question is not rhetorical, because in the Electronic Reverse Auction, the procedure provided for standardized goods and services that are not listed in the Electronic Catalog, price competition only occurs when at least two bidders pass the technical qualification, and when only one succeeds the procedure moves to a negotiation whose purpose is to improve the economic offer of that single supplier. The Organic Law of the National Public Procurement System subjects these purchases to the principles of fair treatment, equality, quality, participation, transparency and publicity (Asamblea Nacional del Ecuador, 2008), and its General Regulation requires evaluation using the meets or does not meet methodology, based on objective parameters linked to the subject matter of the contract (Presidencia de la República del Ecuador, 2022).

The scale of the modality explains the interest of the problem, since according to the official dashboard Contratación Pública EnCifras, in 2024 19,965 Electronic Reverse Auction procedures were awarded for USD 1,749.3 million and in 2025 another 15,974 for USD 1,549.5 million, amounts equivalent to 21.9% and 21.2% of the value awarded in public procurement in each year (Servicio Nacional de Contratación Pública [SERCOP], 2026a). For their part, Romero Loayza et al. (2026), with data from 2022 to 2024, describe the same stability, with more than 19,000 procedures per year, and warn that the qualification phase acts as a filter that “conditions access to economic competition”, since a relevant proportion of bidders do not pass it.

A specification becomes a barrier when only one product fits it. Bhagat and Jha (2023) found in India that tailor-made contracts are among the practices that most restrict competition; Drake and Xu (2025), with Swedish data, that requirements and entry costs change the number of bidders; and the OECD (2024) recommends investigating the causes of single bids.

In Ecuador, research has mainly addressed transparency (Jara Iñiguez et al., 2024), traceability (Mera-Nogales and Aldana-Zavala, 2026) and the claims of disqualified bidders (Alvarado-Miranda and Vega-Crespo, 2022), but not how much spending is awarded without bidding.

Based on the above, the research aims to characterize the registry-based and perceived signals of possibly disproportionate technical requirements and their relationship with supplier participation in the Electronic Reverse Auction procedures published in Ecuador during 2024 and 2025.

METHOD

The research was applied, with a mixed approach of quantitative predominance, a non-experimental, retrospective and cross-sectional design, and a descriptive level. Three sources that observe the phenomenon at different scales were integrated, the Contratación Pública EnCifras dashboard for the national context, a registry matrix of 400 procedures extracted from the SERCOP search portal and a web survey of suppliers, as summarized in Table 1.

Table 1. Sources, techniques and instruments of the study.

Source	Technique	Instrument	Scope
Contratación Pública EnCifras (SERCOP)	Official statistical query	Filters Common Regime > Electronic Reverse Auction, by year and classifier	National aggregate of procedures awarded in 2024 and 2025
Procedure search portal (SERCOP)	Documentary analysis	Registry matrix of 24 variables	400 procedures, 100 per semester, without statistical representativeness
State suppliers	Survey	Closed questionnaire of 12 questions	30 responses; 29 valid from the second question onward

Note. Developed in-house.

The aggregate data were consulted on August 26, 2026 under the path Common Regime > Electronic Reverse Auction, with annual filters and by bidding or negotiation classifier. For the matrix, the portal search returned 47,867 results in the four semesters analyzed, 10,245 in 2024-S1, 16,873 in 2024-S2, 9,715 in 2025-S1 and 11,034 in 2025-S2, of which the first 100 of each interval were retained in the order presented by the portal (SERCOP, 2026b). The selection was non-

probabilistic by equal time quotas, with an overall coverage of 0.84%, so its percentages describe only the records examined and do not estimate national rates.

The matrix collected 24 variables per procedure. Six statuses involving an award were grouped as post-award trajectory, the causes of void declarations were classified using text rules, and mentions of brand, model, certification or exclusivity were searched for.

The survey obtained 30 convenience responses, 29 of them complete. The analysis was descriptive, and the matrix does not record bidders or qualified bidders.

RESULTS

National context of the modality

Negotiation with a single supplier accounted for 39.6% of the value awarded in 2024 and 33.1% in 2025 (Table 2).

Table 2. Electronic Reverse Auction according to Contratación Pública EnCifras, 2024-2025 (millions of USD).

Year	Classifier	Reference budget	Awarded value	Difference	Share of budget
2024	Negotiation (single supplier)	741.6	693.3	48.3	37.1%
2024	Bidding	1,254.9	1,056.0	198.9	62.9%
2024	Total (19,965 procedures)	1,996.5	1,749.3	247.2	100%
2025	Negotiation (single supplier)	550.3	513.4	36.9	31.2%
2025	Bidding	1,213.7	1,036.1	177.6	68.8%
2025	Total (15,974 procedures)	1,764.0	1,549.5	214.5	100%

Note. Query performed on August 26, 2026. Source: SERCOP (2026a).

The difference between budget and award suggests where the savings come from, because in 2024 bidding left a gap of USD 198.9 million compared with USD 48.3 million for negotiation, that is, 15.8% of the reference budget versus 6.5%, a proportion that in 2025 was 14.6% versus 6.7%. Figure 1 shows the weight of each classifier in the awarded value.

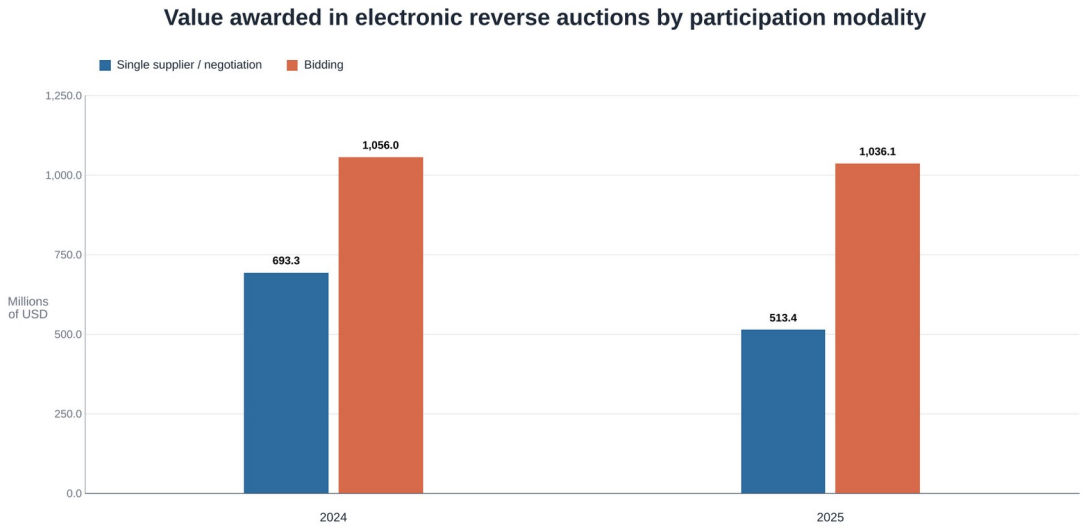

Figure 1. Value awarded in Electronic Reverse Auctions by participation modality.
Note. Values in millions of USD. Source: SERCOP (2026a).

Among the procedures that did reach bidding, participation was also narrow, since Figure 2 indicates that 51.5% of those procedures in 2024 and 51.4% in 2025 had only two qualified participants, while procedures with more than three accounted for 28.2% and 29.6%.

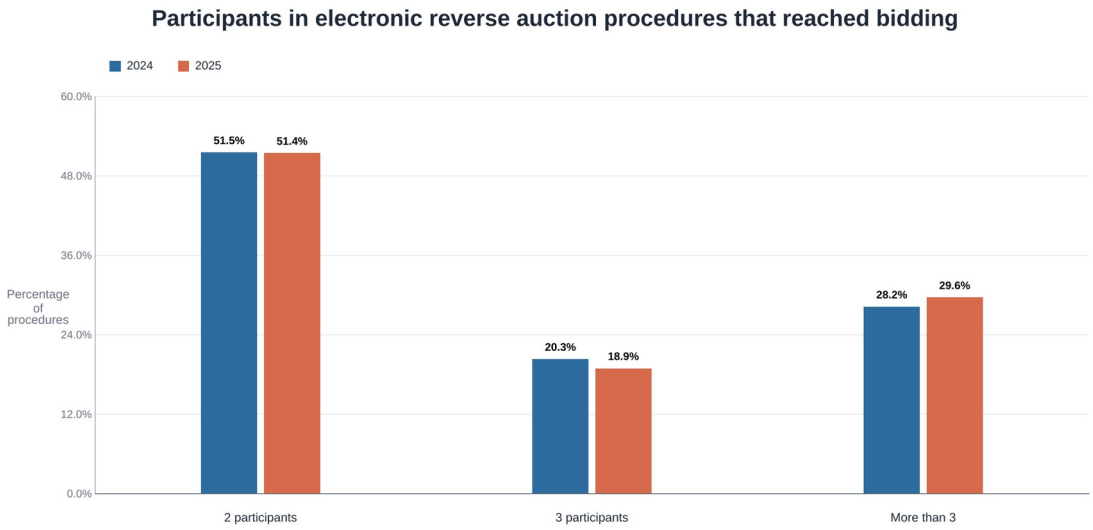

Figure 2. Distribution of participants in the procedures that reached bidding.
Note. Percentage of procedures by qualified participants. Source: SERCOP (2026a).

Composition and results of the 400 procedures

Goods accounted for 284 records (71.0%) and services for 116 (29.0%), although the proportion of services rose from 18 cases in 2024-S2 to 43 in 2025-S2, a difference that is not interpreted as a national trend because of the selection method. Table 3 summarizes the composition by semester.

Table 3. Semester summary of the 400 selected procedures.

Semester	Portal results	Goods	Services	Void	Under execution	Median budget (USD)
2024-S1	10,245	75	25	28	21	30,653
2024-S2	16,873	82	18	45	20	99,874
2025-S1	9,715	70	30	23	34	32,388
2025-S2	11,034	57	43	23	53	123,044
Total	47,867	284	116	119	128	49,874

Note. Each semester contributes 100 procedures. Source: SERCOP (2026b); developed in-house.

When statuses were grouped, 121 of the 200 records from 2024 and 145 of the 200 from 2025 had reached an award or a subsequent contractual phase, while 73 and 46 were listed as void and 6 and 9 in other statuses (canceled, suspended or pending award), as shown in Figure 3. Taken one by one, 128 procedures were under contract execution (32.0%), 119 void (29.8%) and 111 completed (27.8%).

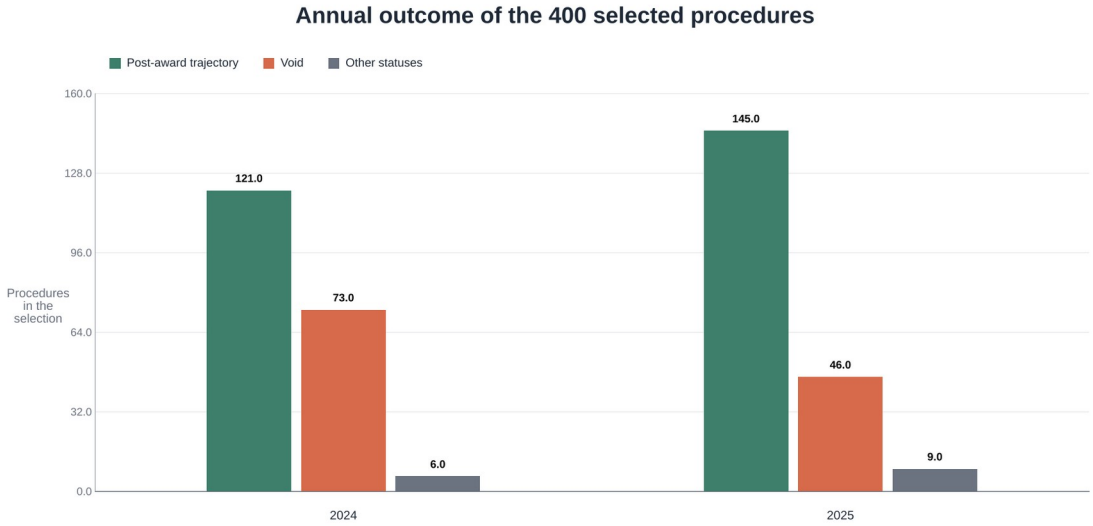

Figure 3. Grouped annual outcome of the 400 selected procedures.
Note. The grouping describes the selection and is not equivalent to a national rate. Developed in-house.

Why were 119 procedures declared void? In 44 of them (37.0%) the entity considered the offers inconvenient, in 43 (36.1%) disqualification or non-compliance was alleged, in 18 (15.1%) no offers were submitted, in 3 (2.5%) the contract was not signed and in 11 (9.2%) the cause fell into another category or had insufficient text (Figure 4). The 43 void declarations due to disqualification are the most relevant for reviewing tender documents and minutes, although the matrix does not make it possible to know whether the non-compliance was technical, documentary or inherent to the offer.

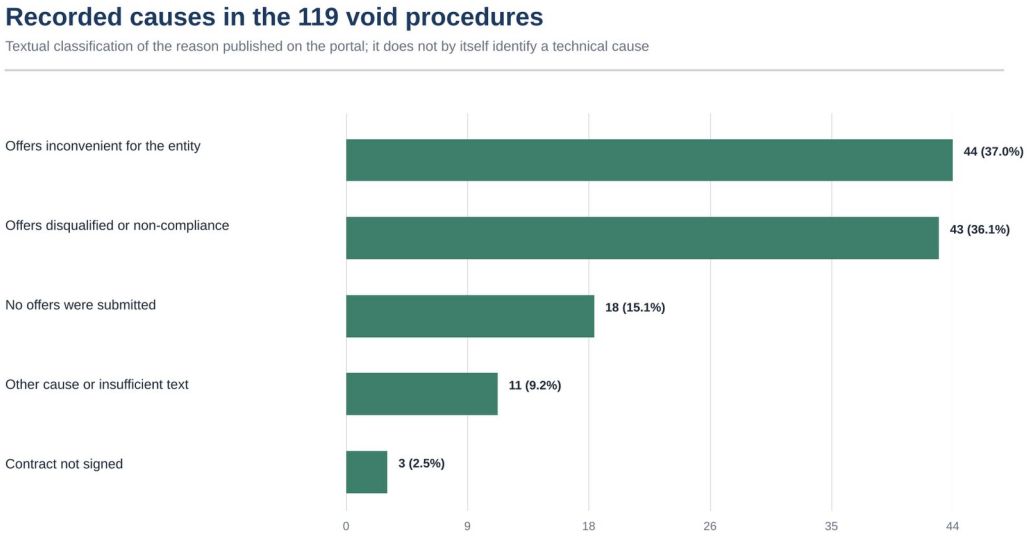

Figure 4. Recorded causes in the procedures declared void.
Note. Textual classification of the reasons published on the portal; n = 119. Developed in-house.

The recorded conditions complete the profile of the procedures (Table 4). The reference budget of the selection totaled USD 85.5 million, with a mean of USD 213,753.63, much higher than the median of USD 49,873.75, a sign of an asymmetric distribution influenced by higher-value contracts. The lexical screening found mentions of maintenance or support in 70 procedures, but only 10 records (2.5%) included more direct references to brand, manufacturer, model, certification, exclusivity, warranty or compatibility, which indicates that the short text on the portal does not replace reading the specifications.

Table 4. Recorded conditions in the 400 procedures.

Indicator	Result	Interpretation
Reference budget	Median USD 49,873.75; Q1-Q3 USD 20,982.34-170,409.73	Asymmetric distribution; the median is prioritized
Payment method	No advance payment: 289 (72.3%); with advance payment: 111, of which 52 with 50%	Payments upon delivery predominate
Delivery period and offer validity	Median of 90 days in both; 247 procedures (61.8%) with an exact validity of 90 days	Their sufficiency depends on the subject matter and the market
Minimum bidding decrement	1%: 198; 5%: 99; 0.5%: 51	The three options account for 87.0%
Institutional coverage	174 entities from 24 provinces	Territorial breadth in a non-random selection

Note. Developed in-house based on the registry matrix.

Suppliers' perceptions

Of the 30 people consulted, 27 (90.0%) had participated in procedures in 2024 or 2025, and among the 29 valid responses experience in services predominated (14), followed by those who participated in goods and services (9) and in goods (6). Table 5 summarizes the responses on requirements and participation.

Table 5. Suppliers' responses on technical requirements and participation.

Question	Distribution	Highlighted percentage
Clarity of requirements	Clear: 1; partially: 15; unclear: 13	96.5% without full clarity
Very specific or difficult requirements	Yes: 27; no: 2	93.1% recalled them
Most difficult requirement	Exact specifications: 7; certifications: 7; warranties or support: 7; experience: 6; documentation: 2	Distributed barriers
Withdrawal due to restrictive requirements	Yes: 26; no: 3	89.7% withdrew at some point
Request for clarifications	Yes: 23; no: 6	79.3% asked
Sufficiency of clarifications	Sufficient: 4; partial: 15; insufficient: 6; not applicable: 4	84.0% of 25 found them partial or insufficient
Own or known disqualification	Yes: 20; no: 3; does not know: 6	69.0%
Effect of specific requirements	Reduce participation: 18; improve quality: 6; depends on the subject matter: 4; no effect: 1	62.1% associate them with lower participation

Note. n = 29 for all questions. Source: web survey of suppliers; developed in-house.

The withdrawal figure deserves attention, because 26 of 29 suppliers stated that they had at some point stopped participating because they considered the conditions restrictive, a form of self-exclusion that leaves no trace in the file or on the official dashboard. Six respondents, on the other hand, attributed an improvement in quality to specific requirements and four said that their effect depends on the subject matter, a nuance that prevents equating technical rigor with restriction. When asked about solutions, clarity of requirements obtained 9 responses, justification of certifications 8 and acceptance of equivalents 7, so that these three measures accounted for 82.8% (Figure 5).

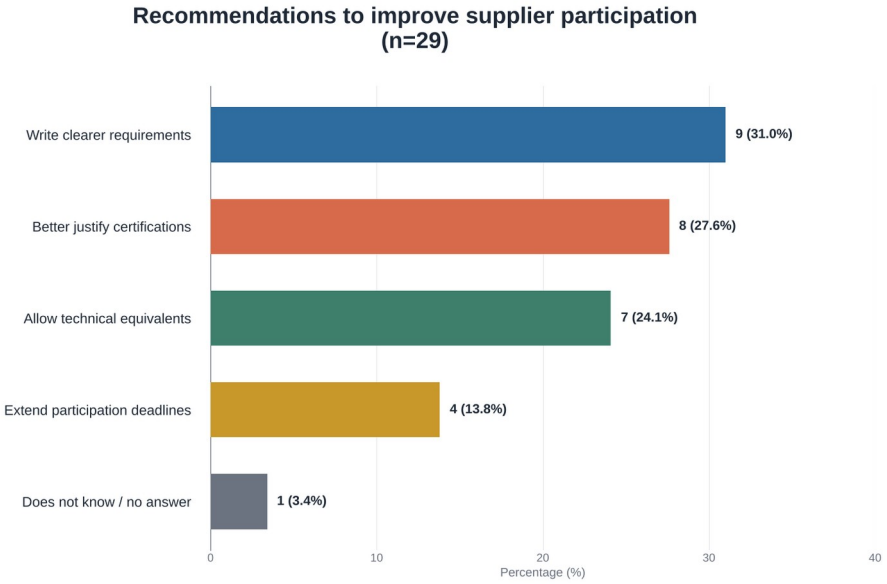

Figure 5. Measures proposed by suppliers to improve participation.
Note. n = 29. Source: web survey of suppliers; developed in-house.

DISCUSSION

The dashboard does not explain why each negotiation had a single qualified bidder, and Ma et al. (2026) warn that requiring two offers may increase failed procedures. Even so, awarding without competition has a cost. Jääskeläinen et al. (2026) saw prices fall with competition in Finland, Kafimbou (2026) placed the greatest savings between seven and nine bidders and Manfredi (2023) found lower prices with reverse auctions. The gap in Table 2 is consistent with this.

The screening found few brands because the portal description does not copy the tender documents. Certifications, warranties and exact specifications tied as the greatest difficulty, in line with Bhagat and Jha (2023) and with Tátrai et al. (2024), who associate division into lots with more bidders.

The authors propose that each set of tender documents include a matrix justifying each requirement and its equivalents, and that any brand or certification be a reasoned exception. Pliatsidis (2022) adds that longer time limits attract more offers, and Hanák (2018) that electronic auctions require good preparation.

Traceability is the other half of the problem, since if SERCOP systematically published the number of offers, qualified and disqualified bidders, together with the specific cause of each rejection, the review that can only be proposed here for the 43 void declarations due to disqualification would be routine, and the information demands documented by Jara Iñiguez et al. (2024) would also be met. Such transparency would strengthen preventive control against practices such as those analyzed by Baquero-Muñoz et al. (2024) on influence peddling or Carrión Carrión and Maldonado Ruiz (2024) on overpricing in 2020 health procurement, and would give local governments, whose execution indicators were studied by Mieles Bachicoria and Carreño Arteaga (2024), a basis for correcting their own procedures.

Among the limitations of the study are that four hundred records are not equivalent to four hundred audited files, selection by portal order is neither random nor proportional, the survey gathered a convenience sample with no link to procedure codes and the matrix lacks the number of bidders, so that no association described here proves causality or irregularity. A second stage should take a random sample, retrieve tender documents, questions and evaluation minutes, and count bidders and qualified bidders in each case.

CONCLUSIONS

Among the conclusions, the Electronic Reverse Auction awarded 19,965 procedures in 2024 and 15,974 in 2025, for about USD 3,298.9 million and around one fifth of the annual value of Ecuadorian public procurement, and negotiation with a single supplier absorbed 39.6% and 33.1% of that value, a substantial fraction that never reached bidding.

It was likewise established that in the selection of 400 procedures, 266 reached an award or a subsequent contractual phase and 119 were declared void, 43 of them due to disqualification or non-compliance, and that the surveyed suppliers repeatedly reported lack of clarity (96.5%), very specific requirements (93.1%) and withdrawal due to restrictive conditions (89.7%), signals that justify reviewing tender

documents although they do not by themselves demonstrate disproportionate requirements.

Finally, it is concluded that clear, reasoned, verifiable requirements open to equivalents can broaden qualified participation, increase the probability of reaching bidding and contribute to value for money without sacrificing quality, for which a technical justification matrix in each set of tender documents and the systematic publication of bidders, qualified bidders and causes of disqualification are proposed.

FINANCING

Non-monetary.

CONFLICT OF INTEREST

The authors declare that they have no conflict of interest in relation to this research.

ACKNOWLEDGMENTS

The authors thank the Universidad Bolivariana del Ecuador and the suppliers who responded to the survey.

REFERENCES

Alvarado-Miranda, C., & Vega-Crespo, E. (2022). La reclamación por violación de derechos a los oferentes en la calificación de ofertas de los procesos de subasta inversa electrónica en el Azuay – 2021 [Claims for violation of bidders' rights in the evaluation of offers in electronic reverse auction processes in Azuay, 2021]. *593 Digital Publisher CEIT, 7*(6-1), 283–296. https://doi.org/10.33386/593dp.2022.6-1.1506

Asamblea Nacional del Ecuador. (2008). *Ley Orgánica del Sistema Nacional de Contratación Pública* [Organic Law of the National Public Procurement System]. Registro Oficial Supplement 395, August 4, 2008.

Baquero-Muñoz, C. I., Correa-Troya, S. R., & Lalaleo-Camino, F. D. (2024). Tráfico de influencias y su impacto en contratación pública en Ecuador [Influence peddling and its impact on public procurement in Ecuador]. *Verdad y Derecho. Revista Arbitrada de Ciencias Jurídicas y Sociales, 3*(especial 2), 204–211. https://doi.org/10.62574/8k4tgv11

Bhagat, G., & Jha, K. N. (2023). Modeling the competition-restrictive actions in public works procurement. *Journal of Public Procurement, 23*(3/4), 365–388. https://doi.org/10.1108/jopp-12-2022-0060

Carrión Carrión, J. S., & Maldonado Ruiz, L. M. (2024). Sobreprecios en la contratación pública en la salud en Ecuador ante la pandemia por COVID-19 en 2020 [Overpricing in public health procurement in Ecuador during the COVID-19 pandemic in 2020]. *Revista Lex, 7*(25), 744–765. https://doi.org/10.33996/revistalex.v7i25.212

Drake, S., & Xu, F. (2025). Contractual requirements and bidding behavior in public procurement with entry. *Journal of Public Economic Theory, 27*(1), e70019. https://doi.org/10.1111/jpet.70019

Hanák, T. (2018). Electronic reverse auctions in public sector construction procurement: Case study of Czech buyers and suppliers. *TEM Journal, 7*(1), 41–52. https://doi.org/10.18421/tem71-06

Jara Iñiguez, I., López, S., Hidalgo, M., & Olivares, A. (2024). Transparencia en la contratación pública en Ecuador: Un análisis de la demanda de acceso a la información [Transparency in public procurement in Ecuador: An analysis of the demand for access to information]. *Revista de Gestión Pública, 13*(1), 54–77. https://doi.org/10.22370/rgp.2024.13.1.4542

Jääskeläinen, J., Tukiainen, J., Hiilamo, T., & Magga, K.-M. (2026). Anatomy of competition in public procurement. *Journal of Public Procurement*, 1–21. https://doi.org/10.1108/jopp-08-2025-0100

Kafimbou, B. H. (2026). Number of bidders, level of competition, and bid pricing in public procurement. *Journal of Public Finance and Public Choice, 41*(2), 141–176. https://doi.org/10.1332/25156918y2026d000000030

Ma, J., Marmer, V., & Xu, P. (2026). Managing procurement auction failure: Bid requirements or reserve prices?. *The RAND Journal of Economics*. https://doi.org/10.1111/1756-2171.70055

Manfredi, J. (2023). Incidencia del procedimiento subasta inversa en los precios de contratación de las compras públicas [Impact of the reverse auction procedure on public procurement prices]. *Anuario del Área Socio-Jurídica, 15*(1), 42–54. https://doi.org/10.26668/1688-5465_anuariosociojuridico/2023.v15i1.9192

Mera-Nogales, J. C., & Aldana-Zavala, J. J. (2026). Incidencia del marco normativo en la contratación pública del Ecuador [Impact of the legal framework on public procurement in Ecuador]. *Verdad y Derecho. Revista Arbitrada de Ciencias Jurídicas y Sociales, 5*(especial 7), 1–11. https://doi.org/10.62574/tgdvcv08

Mieles Bachicoria, J. L., & Carreño Arteaga, N. P. (2024). Evaluación de la contratación pública mediante indicadores en el Gobierno Municipal de Santo Domingo, Ecuador [Evaluation of public procurement through indicators in the Municipal Government of Santo Domingo, Ecuador]. *Uniandes Episteme, 11*(3), 308–321. https://doi.org/10.61154/rue.v11i3.3535

OECD. (2024). *Improving competitive practices in Hungary's public procurement: Reducing single-bids and enhancing supplier participation*. OECD Publishing. https://doi.org/10.1787/5d1c1ec1-en

Pliatsidis, A. C. (2022). Impact of the time limits for the receipt of tenders on the number of bidders: Evidence from public procurement in Greece. *Journal of Public Procurement, 22*(4), 314–335. https://doi.org/10.1108/jopp-05-2022-0025

Presidencia de la República del Ecuador. (2022). *Reglamento General a la Ley Orgánica del Sistema Nacional de Contratación Pública* [General Regulation of the Organic Law of the National Public Procurement System]. Registro Oficial, 2022.

Romero Loayza, C. F., Ramos Jinez, C. D., Robayo Cabrera, G. F., & Aviles Quiñonez, W. P. (2026). Etapas de la contratación pública enfocadas en los procesos de subasta inversa electrónica [Stages of public procurement focused on electronic reverse auction processes]. *Arandu UTIC, 13*(2), 248–261. https://doi.org/10.69639/arandu.v13i2.2173

Servicio Nacional de Contratación Pública. (2026a). *Contratación Pública EnCifras: Régimen Común, Subasta Inversa Electrónica 2024-2025* [Public Procurement in Figures: Electronic Reverse Auction 2024-2025] [Data set]. SERCOP.

Servicio Nacional de Contratación Pública. (2026b). *Portal de consulta de procesos de contratación: Subasta Inversa Electrónica 2024-2025* [Procurement procedure search portal: Electronic Reverse Auction 2024-2025] [Data set]. https://www.compraspublicas.gob.ec/ProcesoContratacion/compras/PC/buscarProceso.cpe?sg=1

Tátrai, T., Vörösmarty, G., & Juhász, P. (2024). Intensifying competition in public procurement. *Public Organization Review, 24*, 237–257. https://doi.org/10.1007/s11115-023-00742-0

Copyright: 2026 By the authors. This article is open access and distributed under the terms and conditions of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) license https://creativecommons.org/licenses/by-nc-sa/4.0/