ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 7| July 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

ACCOUNTING FOR LONG-TERM CONSTRUCTION CONTRACTS UNDER PFRS 15: CHALLENGES, PRACTICES, AND RESEARCH DIRECTIONS

Timoleon S. Lianza
Eastern Visayas State University, Philippines

ABSTRACT

This literature review examines recent studies on accounting methods for long-term construction contracts under PFRS 15, focusing on revenue recognition practices and their implications. Using Google Scholar, approximately 16,400 articles published between 2022 and 2024 were screened, with 20 studies identified as relevant. Key themes emerging from the review include the application of PFRS 15, transaction cost assessments, pricing and risk allocation, and creative accounting practices affecting financial reporting quality. Gaps were identified in empirical validation of revenue recognition models, especially in developing country contexts, and limited focus on implementation challenges faced by construction firms. This review concludes with a proposed research agenda to address these gaps and enhance practical guidance for accountants, auditors, construction managers, and policymakers seeking to improve revenue recognition practices and ensure faithful financial reporting in the construction sector.

KEYWORDS: *PFRS 15, Long-Term Construction Contracts, Revenue Recognition, Transaction Costs, Creative Accounting, Financial Reporting*

1. INTRODUCTION

Long-term construction contracts are a cornerstone of the construction industry, forming the basis for major infrastructure, housing, and commercial projects that drive economic development. However, these contracts present significant complexities in accounting and financial reporting, due to their multi-phase deliverables, long durations, and substantial estimation uncertainties. Determining the timing and amount of revenue to recognize requires careful assessment of performance obligations, transaction prices, and progress measurement, creating challenges for both preparers and auditors.

Globally, the adoption of International Financial Reporting Standard (IFRS) 15: Revenue from Contracts with Customers was intended to standardize and improve revenue recognition practices across industries. In the Philippines, Philippine Financial Reporting Standard (PFRS) 15, which aligns with IFRS 15, introduced a five-step revenue recognition model, transforming how construction revenues are measured and reported. Under PFRS 15, firms recognize revenue based on the transfer of control, rather than the completion of activities, significantly affecting profit measurement, tax liabilities, and key financial ratios.

The construction industry, characterized by long-term contracts, complex billing arrangements, and variable considerations such as change orders and incentives, is particularly impacted by these standards. Moreover, the application of PFRS 15 requires significant professional judgment, raising concerns about consistency, comparability, and potential earnings management, especially in developing countries where technical capacity and regulatory enforcement may be limited.

Despite these challenges, there remains limited empirical and contextualized literature examining how construction firms implement PFRS 15 in practice, particularly within the Philippine context. A comprehensive understanding of existing studies is essential to identify prevailing themes, practical implications, and research gaps to inform future accounting research, policymaking, and professional practice.

This review, therefore, aims to synthesize recent literature on accounting methods for long-term construction contracts under PFRS 15, focusing on revenue recognition practices, transaction costs, risk allocation, and financial reporting quality. By mapping the current state of knowledge, this study seeks to support accounting practitioners, auditors, construction managers, and scholars in navigating the complexities of PFRS 15 and to propose a targeted research agenda addressing implementation, compliance, and financial reporting challenges in construction contract accounting.

2. METHODOLOGY

This review used Google Scholar with the keyword phrase "construction contracts accounting methods," limited to publications from 2022 to 2024 to ensure relevance and currency. The initial search yielded approximately 16,400 articles. Screening was conducted based on relevance, recency, and applicability to accounting methods under IFRS 15/PFRS 15, resulting in a final selection of 20 articles.

Inclusion criteria focused on studies addressing revenue recognition, accounting treatment, transaction costs, pricing, and financial reporting in construction contracts. Studies were

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 7| July 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

excluded if they primarily examined technological integrations such as blockchain, building information modeling (BIM), or drone applications, as these focus on construction operations and project management rather than accounting and financial reporting frameworks, which are the core of this review.

A narrative synthesis approach was adopted to identify key themes, practical implications, and research gaps, providing an integrated understanding of accounting methods for long-term construction contracts under PFRS 15.

3. THEMATIC LITERATURE REVIEW

3.1 Application of PFRS 15 in Construction Contracts

Bubnovskaya et al. (2022) examined the practical application of IFRS 15 to construction contracts, identifying significant challenges in determining performance obligations and calculating transaction prices, particularly in multi-phase projects with complex deliverables. For example, in a design-build project, a contractor may be responsible for both the architectural design and the construction itself. Under IFRS 15, the company must decide whether these are two separate performance obligations (design as one, construction as another) or a single combined obligation. This decision affects when and how revenue is recognized, because revenue is recognized as each obligation is satisfied.

Although IFRS 15 provides structured guidance, the study highlights that firms often struggle with exercising professional judgment in measuring progress towards satisfying performance obligations when cost estimates are uncertain. For instance, if material prices fluctuate significantly or unexpected site conditions arise, it becomes difficult to estimate total project costs accurately. This uncertainty affects the percentage-of-completion calculations, leading to potential inconsistencies in revenue recognition and reduced comparability across companies and reporting periods.

This challenge is illustrated in the case of ABC Construction Corp., which entered into a ₱50 million design-build contract that included architectural design services (₱5 million standalone price) and construction services (₱45 million standalone price). Management identified these as two distinct performance obligations, allocating the transaction price accordingly. At year-end, the design work was completed, but construction was only 60% complete, with ₱27 million in costs incurred out of an estimated ₱45 million total cost, resulting in ₱27 million revenue recognized for construction and ₱5 million for design, or ₱32 million total revenue recognized. However, if cost estimates change due to unforeseen factors, revenue recognition may be misstated, highlighting the complex judgments and estimation uncertainties faced by firms under PFRS 15, as discussed by Bubnovskaya et al. (2022).

Coetsee et al. (2022) analyzed IFRS 15 disclosures among South African construction companies and found that while adoption has enhanced the decision usefulness of financial statements, significant inconsistencies remain in how firms present and disclose revenue-related information. For example, some companies provided detailed breakdowns of revenue by type of service and performance obligation, while others presented only aggregate contract revenue, limiting transparency for users of financial statements.

To illustrate, consider a construction firm with two ongoing contracts: Contract A for office building construction worth ₱100 million and Contract B for road rehabilitation worth ₱50 million. If the company discloses only the total revenue of ₱150 million without specifying that Contract A is 80% complete (₱80 million revenue recognized) and Contract B is 40% complete (₱20 million revenue recognized), financial statement users lack clarity about project progress, risks, and expected future cash flows. This incomplete disclosure undermines comparability and decision usefulness, particularly for investors, lenders, and regulators assessing the firm's performance and contract risks. Coetsee et al. (2022) emphasize that such variability in disclosure practices, even under the same IFRS 15 framework, can reduce financial reporting quality and stakeholder confidence.

Mohd Fauzi et al. (2024) examined the adoption of MFRS 15, Malaysia's equivalent of IFRS 15, and its organizational implications for construction firms. Their study found that implementation requires significant adjustments in accounting systems, staff training, and internal controls to ensure accurate revenue recognition and compliance. The transition often involves not only changes in accounting policies but also organizational restructuring and enhanced cross-department coordination.

For example, when adopting MFRS 15, a construction company may need to upgrade its accounting software to capture detailed contract data, such as separate performance obligations, cost estimates, and revenue recognition schedules. Suppose a firm has an existing system that records construction contract revenue on a simple cash basis. To comply with MFRS 15, it must shift to recognizing revenue based on progress towards satisfaction of performance obligations, requiring system enhancements to calculate percentage of completion, input costs, and output measures accurately.

Additionally, staff training becomes critical. Accountants, project managers, and billing personnel need to understand how cost estimates and progress reports feed into revenue recognition calculations. Without proper training, misinterpretation of the standard's requirements can lead to errors in financial reporting. Mohd Fauzi et al. (2024) emphasize that such organizational and operational challenges are often underestimated, yet they significantly impact a firm's ability to implement MFRS 15 effectively and maintain reliable financial statements.

Onie et al. (2023) evaluated the impacts of IFRS 15 adoption among Australian firms and found mixed effects on revenue and profitability, depending on contract complexity and industry.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 7| July 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

Their study highlighted that while transparency improved due to enhanced disclosure requirements, firms faced significant challenges in applying the five-step model, especially for contracts with multiple performance obligations and variable considerations. This finding supports the earlier studies emphasizing that practical implementation of PFRS 15 remains challenging, particularly in construction projects with long durations and uncertain cost estimates.

Further, West and Buckby (2023) explored professional judgment in accounting, linking it to Aristotelian practical wisdom (phronesis). They argue that effective application of accounting standards like IFRS 15 requires not only technical knowledge (episteme) and practical skills (techne) but also moral and contextual wisdom (phronesis) to make sound judgments in complex, uncertain scenarios. This suggests that PFRS 15 implementation in construction firms is not purely a technical exercise but demands ethical reasoning and contextual understanding to ensure faithful revenue recognition.

3.2 Transaction Costs and Pricing

Abdel-Galil et al. (2022) assessed transaction costs in construction projects and emphasized that effective transaction cost management is crucial for ensuring profitability and fair revenue recognition. Transaction costs include administrative costs (preparing and managing contracts), enforcement costs (monitoring compliance with terms), and adaptation costs (modifying contracts when project conditions change). For example, if a contractor underestimates adaptation costs due to unexpected design revisions, the actual profitability of the project declines, and revenue recognized under PFRS 15 based on projected margins could be overstated, resulting in financial misstatements. Their study highlights the need for construction firms to incorporate comprehensive transaction cost analysis into project pricing and revenue recognition decisions.

Abd El-Hamid et al. (2023) examined construction contract pricing strategies, focusing on risk allocation between contractors and owners. Their findings suggest that pricing decisions are closely linked to revenue recognition because the party assuming more risk faces greater variability in revenue timing and certainty. For instance, under a fixed-price contract, contractors bear the risk of cost overruns. If costs unexpectedly rise, profits decline, but revenue recognized under PFRS 15 may not immediately reflect this risk if progress measurement is input-based without timely cost re-estimation. This demonstrates the importance of aligning pricing strategies with reliable cost estimation and revenue recognition approaches to avoid misstatements.

Shehadeh et al. (2022) developed a risk assessment model for determining optimal gain–pain share ratios in target cost contracts, where contractors and owners share savings or overruns relative to an agreed target cost. For example, if a target cost is set at ₱100 million and the final cost is ₱90 million, with a 50:50 gain share agreement, the contractor gains ₱5 million as incentive income. Under PFRS 15, such incentives are treated as variable consideration and included in the transaction price only if it is highly probable that it will not result in significant revenue reversal. Their study emphasizes that while incentive structures motivate cost efficiency, they require careful estimation and professional judgment to ensure proper revenue recognition and compliance.

Ali et al. (2020) analyzed critical causes of transaction cost escalation in public sector construction projects in Pakistan, identifying factors such as frequent design changes, inadequate project planning, and bureaucratic delays. These factors lead to increased administrative, enforcement, and adaptation costs, reducing project profitability and complicating revenue recognition under PFRS 15. For instance, unanticipated adaptation costs from frequent design changes can erode margins and distort revenue recognized based on projected cost-to-cost estimates, increasing the risk of misstatements.

Complementing this, Zainuddin and Mustapa (2024) developed a Transaction Cost Economics (TCE) framework for the Malaysian housing development sector, emphasizing that uncertainty and asset specificity significantly increase transaction costs. Their framework suggests that effective governance mechanisms and contractual arrangements reduce opportunism and cost escalation, supporting more accurate pricing and revenue recognition decisions. Applying this TCE perspective can strengthen construction firms' ability to align transaction cost management with PFRS 15 requirements, ensuring profitability and faithful financial reporting.

3.3 Creative Accounting and Financial Reporting Quality

Abed et al. (2022) conducted a systematic literature review on creative accounting determinants and their impact on financial reporting quality. Their study highlighted that construction companies are particularly prone to earnings management due to the complexity and discretion involved in revenue recognition, especially under standards like PFRS 15. For example, when construction firms use aggressive cost-to-cost estimates to recognize higher revenue early in a project, it can inflate reported earnings and mislead stakeholders about actual financial performance. Abed et al. (2022) emphasized the need for stronger internal controls and audit procedures to detect and mitigate creative accounting practices that compromise the reliability of financial statements.

Al-Hashimy (2022) reviewed accounting manipulation techniques and prevention methods across various industries, including construction. The study identified common techniques such as premature revenue recognition, underestimating costs, and manipulating contract progress reports to smooth earnings. For instance, a contractor might recognize revenue on a change order before client approval to boost quarterly results. To counter such practices, Al-Hashimy (2022) recommends implementing robust auditing standards, mandatory disclosure requirements, and regulatory enforcement. These measures are particularly important in construction contracts where long durations,

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 7| July 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

complex performance obligations, and subjective estimates increase the risk of earnings manipulation, thereby undermining financial reporting quality and stakeholder confidence.

3.4 Risk Allocation and Contractual Provisions

Zhu and Cheung (2022) explored equity gaps in construction contracting, highlighting how unequal risk allocation often leads to disputes, delayed payments, and revenue recognition uncertainties. Their study found that contractors who bear disproportionate risks, such as unforeseen site conditions or material price volatility, may face financial strain if contract provisions do not allow for cost adjustments. For example, in a fixed-price contract where steel prices unexpectedly increase by 30%, the contractor absorbs all additional costs, potentially eroding profit margins. This situation creates challenges in applying PFRS 15, as revenue recognized may not reflect actual economic benefits if contract risks are not adequately priced and managed. Zhu and Cheung (2022) advocate for more balanced contractual risk-sharing mechanisms to improve project sustainability and financial reporting reliability.

Riduwan et al. (2023) applied earned value management (EVM) methods in cost and time analysis of construction projects, demonstrating their usefulness in aligning work progress measurement with revenue recognition principles under PFRS 15. For example, if a construction project has a budgeted cost of ₱50 million and at a reporting date, actual costs incurred are ₱20 million with an earned value (work performed) also at ₱20 million, EVM confirms that the project is on budget and 40% complete. This allows revenue recognition of 40% of the total contract price if input and output measures align. Riduwan et al. (2023) emphasize that EVM enhances accuracy in determining progress and profitability, reducing the risk of revenue misstatements and improving the credibility of financial reports for stakeholders.

4. DISCUSSION

At a broader level, Cojocaru et al. (2023) conducted a comprehensive review of current research trends on IFRS 15, highlighting that while academic interest in revenue recognition has grown significantly, practical implementation challenges remain prevalent across industries. Their findings emphasize that professional judgment and estimation uncertainties in identifying performance obligations, determining transaction prices, and assessing variable considerations continue to pose difficulties for firms. Moreover, they noted that disclosure practices under IFRS 15 remain varied, undermining the standard's objective of enhancing transparency and comparability. Importantly, Cojocaru et al. (2023) identified a gap in empirical studies assessing the economic consequences of IFRS 15 adoption, such as its impact on financial performance, market valuation, and stakeholder decision-making. These insights reinforce the need for industry-specific research, particularly in sectors like construction, where revenue recognition involves complex contractual arrangements and significant estimation uncertainties.

The literature reviewed highlights that while PFRS 15 provides a structured framework for revenue recognition in long-term construction contracts, its practical implementation remains challenging for firms. A consistent theme across studies is the significant professional judgment required in identifying performance obligations and determining transaction prices, particularly in complex, multi-phase projects (Bubnovskaya et al., 2022). This complexity increases the risk of inconsistent application, as firms interpret guidance differently based on their project structures and cost estimation capabilities.

Further, disclosure practices under IFRS 15/PFRS 15 remain inconsistent. As Coetsee et al. (2022) found, while financial statement usefulness has improved, many firms continue to present aggregate revenues without adequate breakdowns by performance obligations and project stages. This lack of transparency undermines comparability and limits stakeholders' ability to assess project progress, risks, and future cash flows accurately.

The organizational impact of adopting PFRS 15 is also significant. As shown by Mohd Fauzi et al. (2024), effective implementation requires not only technical adjustments in accounting systems but also extensive staff training and strengthened internal controls to support reliable revenue recognition. Without these organizational changes, there is a heightened risk of misapplication and non-compliance.

Moreover, the review highlights that transaction costs and pricing strategies directly affect revenue recognition outcomes. Studies by Abdel-Galil et al. (2022) and Abd El-Hamid et al. (2023) emphasize the need for contractors to integrate transaction cost management and risk allocation analysis into their pricing decisions to avoid profitability erosion and revenue misstatements under PFRS 15. Similarly, Shehadeh et al. (2022) show that incentive-based pricing structures, such as gain–pain share agreements, introduce variable consideration complexities that require careful estimation to comply with revenue recognition requirements.

Another critical concern identified is the vulnerability of construction firms to creative accounting practices. Abed et al. (2022) and Al-Hashimy (2022) warn that the discretion involved in estimating project costs and progress can enable premature revenue recognition and earnings management, compromising financial reporting reliability. This underscores the importance of robust audit procedures and regulatory enforcement to mitigate risks of manipulation.

Finally, studies on risk allocation and contractual provisions (Zhu & Cheung, 2022) and the application of earned value management (Riduwan et al., 2023) highlight practical tools that can improve revenue recognition accuracy. Equitable risk-sharing mechanisms and integrated project cost-time analysis enhance firms' ability to align work progress with recognized revenue,

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 7| July 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

ensuring that financial reports faithfully represent economic realities.

Overall, while PFRS 15 offers theoretical clarity, practical implementation challenges persist, particularly in developing country contexts like the Philippines, where resource constraints and limited technical capacity may hinder compliance. Addressing these gaps through targeted research, industry guidelines, and capacity-building initiatives is essential to improve revenue recognition practices in the construction sector.

5. RESEARCH AGENDA

This review identified several critical gaps and opportunities for future research on accounting methods for long-term construction contracts under PFRS 15:

1. **Empirical evaluation of PFRS 15 implementation in Philippine construction firms.**
   There is limited empirical evidence assessing how local firms interpret and apply PFRS 15's five-step revenue recognition model in practice. Future studies should examine firm-level implementation challenges, compliance levels, and the effects on financial reporting quality.

2. **Development of industry-specific guidelines and best practices.**
   While PFRS 15 provides general principles, the construction industry would benefit from contextualized guidelines addressing practical issues such as identifying multiple performance obligations, measuring progress in uncertain cost environments, and allocating transaction prices in complex contracts.

3. **Analysis of transaction cost management and its impact on revenue recognition.**
   Research should explore how transaction costs (administrative, enforcement, adaptation) influence project pricing strategies and profitability, and how firms can integrate transaction cost economics with revenue recognition decisions under PFRS 15.

4. **Examination of risk allocation mechanisms in contracts.**
   Studies can investigate how different contractual risk-sharing arrangements affect revenue recognition timing, estimation uncertainties, and financial statement reliability. Comparative analyses of fixed-price, cost-plus, and target cost contracts can provide insights into optimal contractual structures for accurate accounting.

5. **Creative accounting practices and ethical considerations.**
   Given the identified risk of earnings management in construction firms, future research should examine the prevalence of creative accounting practices, the effectiveness of current audit procedures, and potential policy interventions to strengthen financial reporting integrity.

6. **Cross-country comparative studies within ASEAN.**
   Comparative research across ASEAN countries can identify best practices and common challenges in applying IFRS 15/PFRS 15 in construction industries with similar economic, regulatory, and operational contexts, facilitating regional standard-setting and capacity-building initiatives.

CONCLUSION

This literature review synthesized recent studies on accounting methods for long-term construction contracts under PFRS 15, highlighting both theoretical guidance and practical challenges faced by construction firms. Key themes identified include complex judgments in identifying performance obligations and measuring progress, inconsistent disclosure practices, and significant organizational adjustments required for effective implementation. The review also emphasized that transaction cost considerations and pricing strategies directly influence revenue recognition, while creative accounting practices remain a persistent risk, undermining financial reporting quality.

Despite PFRS 15's structured framework, practical implementation challenges persist, especially in developing countries such as the Philippines, where resource constraints and limited technical capacity may hinder compliance. Addressing these gaps through empirical research, development of industry-specific guidelines, and cross-country comparative studies can enhance theoretical understanding and provide practical solutions to improve revenue recognition practices in the construction sector.

Ultimately, strengthening the application of PFRS 15 in construction accounting will require collaborative efforts among practitioners, academics, regulators, and industry associations to ensure that financial statements faithfully represent the economic realities of long-term construction contracts, thereby supporting better decision-making and fostering stakeholder confidence.

REFERENCE

1. *Abd El-Hamid, S. M., Farag, S., & Abdelalim, A. M. (2023). Construction contracts' pricing according to contractual provisions and risk allocation. International Journal of Civil Structural Engineering Research, 11, 11–38.*
2. *Abdel-Galil, E., Ibrahim, A. H., & Alborkan, A. (2022). Assessment of transaction costs for construction projects. International Journal of Construction Management, 22(9), 1618–1631. https://doi.org/10.1080/15623599.2020.1738204*
3. *Abed, I. A., Hussin, N., Ali, M. A., Haddad, H., Shehadeh, M., & Hasan, E. F. (2022). Creative accounting determinants and financial reporting quality: Systematic literature review. Risks, 10(4), 76. https://doi.org/10.3390/risks10040076*
4. *Ali, Z., Ahmad, I., & Hussain, Z. (2020). Analysis of critical causes of transaction cost escalation in public sector construction projects. Pakistan Journal of Commerce and Social Sciences, 14(4), 838–865. https://hdl.handle.net/10419/228727*
5. *Al-Hashimy, H. N. H. (2022). A review of accounting manipulation and detection: Technique and prevention*

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 7| July 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

methods. International Journal of Business and Management Invention, 11(10), 82–89. https://doi.org/10.35629/8028-11108289

6. *Bubnovskaya, T. V., Gadzhibek, V. P., & Kim, T. V. (2022). IFRS 15 application for accounting of revenue from construction contracts. Independent Journal of Management & Production, 13(4), s462–s472. https://doi.org/10.14807/ijmp.v13i4.1920*
7. *Coetsee, D., Mohammadali-Haji, A., & Van Wyk, M. (2022). Revenue recognition practices in South Africa: An analysis of the decision usefulness of IFRS 15 disclosures. South African Journal of Accounting Research, 36(1), 22–44. https://doi.org/10.1080/10291954.2020.1855886*
8. *Cojocaru, B. A. C., Jieri, N., & Asaloș, N. (2023). Current research trends in IFRS 15 revenue from contracts with customers: A comprehensive review. Analele Universității Ovidius, Seria: Ştiinţe Economice, (2), 670–678.*
9. *Mohd Fauzi, S. I., Ali, M. M., & Ghani, E. K. (2024). MFRS 15 revenue from contracts with customers: Its adoption and the organisational change. Journal of Revenue and Pricing Management, 23(6), 542–553.*
10. *Onie, S., Ma, L., Spiropoulos, H., & Wells, P. (2023). An evaluation of the impacts of the adoption of IFRS 15 revenue from contracts with customers. Accounting & Finance, 63, 953–973.* ***https://doi.org/10.1111/acfi.12978***
11. *Riduwan, S. P., Witjaksana, B., & Tjendani, H. T. (2023). Cost and time analysis using earned value method in the construction of sports facilities in Kecamatan Kedewan Kabupaten Bojonegoro. Asian Journal of Engineering, Social and Health, 2(12), 1604–1652.*
12. *Shehadeh, A., Alshboul, O., & Hamedat, O. (2022). Risk assessment model for optimal gain–pain share ratio in target cost contract for construction projects. Journal of Construction Engineering and Management, 148(2), 04021197. https://doi.org/10.1061/(ASCE)CO.1943-7862.0002222*
13. *West, A., & Buckby, S. (2023). Professional judgement in accounting and Aristotelian practical wisdom. Accounting, Auditing & Accountability Journal, 36(1), 120–145. https://doi.org/10.1108/AAAJ-09-2020-4949*
14. *Zainuddin, F. K., & Mustapa, F. D. (2024). Transaction cost economics framework development for Malaysian housing development. Journal of Construction in Developing Countries, 29.*
15. *Zhu, L., & Cheung, S. O. (2022). Equity gap in construction contracting: Identification and ramifications. Engineering, Construction and Architectural Management, 29(1), 262–286. https://doi.org/10.1108/ECAM-09-2020-0725*