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WELCOME SPEECH FROM THE CHAIRMAN

RISM 17th International Surveying Conference for Undergraduates (ISCU 2025)

بسم الله الرحمن الرحيم السلام

عليكم ورحمة الله وبركاته

Greetings to all,

It is with great pleasure that I welcome you to the 17th RISM International Surveying Conference for Undergraduates (ISCU 2025), themed “*Embracing Construction Revolution 4.0: Transforming Malaysia’s Built Environment.*” On behalf of the Royal Institution of Surveyors Malaysia (RISM), I also wish to express our sincere appreciation to Universiti Teknologi MARA (UiTM), Perak Campus, for graciously hosting this significant event.

As we navigate the era of the Fourth Industrial Revolution (IR4.0)—or in our context, Construction Revolution 4.0 (CR4.0)—we are witnessing transformative advancements across the global construction sector. Technologies such as Building Information Modelling (BIM), the Internet of Things (IoT), artificial intelligence (AI), robotics, big data analytics, and cloud computing are redefining the way we build, manage, and interact with our built environment. For Malaysia, embracing CR4.0 is a strategic imperative to achieve our socio-economic and environmental goals.

This conference serves as a vital platform to unite surveying undergraduates from various disciplines, fostering critical dialogue on industry challenges, enhancing professional networking, and preparing a new generation of talent for the rapidly evolving construction landscape. It is also an opportunity for employers to engage with and inspire our future professionals.

I would like to extend my heartfelt thanks to all industry speakers, paper presenters, judges, and participants for their time, contributions, and support in making ISCU 2025 a success. I also commend the organising committee for curating a meaningful and dynamic conference experience.

May the knowledge gained, connections formed, and ideas exchanged during this event inspire all participants to lead and innovate in their future endeavours.

Wishing everyone a productive and memorable conference.

Prof. Ts Sr Dr. Adi Irfan Bin Che Ani'

Chairman, Universities' Partnering Committee

RISM Session 2024/2025

May 2025

WELCOME SPEECH FROM CO-CHAIRMAN

RISM 17th International Surveying Conference for Undergraduates (ISCU 2025)

Bismillahirrahmanirrahim.

السلام عليكم ورحمة الله وبركاته and greetings to all.

It is my great pleasure to welcome everyone to the 17th International Surveyor Conference for Undergraduates (ISCU 2025), proudly hosted by Universiti Teknologi MARA (UiTM) Perak Branch in collaboration with the Royal Institution of Surveyors Malaysia (RISM). This event is a meaningful platform for students in the built environment to share ideas, showcase innovations, and build professional networks. We are honoured by your presence and enthusiastic participation, with 135 accepted papers and 78 poster presentations this year.

UiTM Perak, home to the College of Built Environment, has long been a hub for academic excellence in architecture, planning, and surveying. Our commitment remains strong in nurturing competent graduates who meet industry demands and contribute to nation-building.

While you're here, we invite you to experience the heritage and culture of Perak Tengah from the architectural richness of Rumah Kutai to the historical towns of Pasir Salak, Bota, and Kampung Gajah.

To all presenters and winners, congratulations on your achievements. Let your work today be a catalyst for future success and academic growth. We hope this conference will inspire you to explore new ideas, foster collaboration, and make lasting memories.

My deepest thanks to the Royal Institution of Surveyors Malaysia (RISM) and the organising committee for making this event a success.

We hope your experience here will be rewarding and unforgettable.

Thank you. Selamat datang dan selamat berjaya.

Associates Professor Dr. Nur Hisham Ibrahim, *PMP*

Co-Chairman, Universities' Partnering Committee

RISM Session 2024/2025

May 2025

WELCOME SPEECH FROM THE PROJECT DIRECTOR

RISM 17th International Surveying Conference for Undergraduates 2025

Alhamdulillah, all praise to Allah S.W.T. for His guidance and blessings in making the RISM 17th International Surveying Conference for Undergraduates (ISCU) 2025 a reality.

It is with great honour and gratitude that I welcome all participants, guests, academicians, and industry professionals to this prestigious event, proudly organized under the Royal Institution of Surveyors Malaysia (RISM). This 17th edition of ISCU stands as a proud testament to our collective dedication toward academic excellence, professional collaboration, and youth empowerment in the field of surveying.

I extend my heartfelt appreciation to RISM for its unwavering support, to the hardworking ISCU 2025 Organising Committee, and to all 16 partnering universities across Malaysia for their commitment and contributions. Your efforts have shaped this conference into a dynamic platform for knowledge exchange, innovation, and professional growth.

To the academicians and practitioners present, your insights are invaluable in bridging the gap between academic theory and real-world practice. To our undergraduate participants, your passion, curiosity, and commitment are the very foundation of our future. May this conference not only deepen your academic journey but also ignite a spirit of leadership, integrity, and sustainable thinking.

Let this gathering serve as more than an academic milestone. May it foster lifelong networks, inspire transformative ideas, and chart new directions in our shared professional journey.

Wishing everyone a rewarding and inspiring conference experience.

Sr Dr. Nurul Fadzila Zahari

Project Director

RISM 17th ISCU 2025

REVOLUTIONIZING QUANTITY SURVEYING PROBLEM-SOLVING IN CONTRACT ADMINISTRATION THROUGH AI EMPOWERMENT

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ABSTRACT

Contract administration is a critical function in the construction industry, ensuring the smooth execution and completion of projects. Quantity Surveyors (QS) play a pivotal role in managing financial aspects, preparing tender documents, monitoring costs, and resolving contractual disputes. However, the increasing complexity of contract administration often results in inefficiencies, errors, and disputes, demanding a higher level of problem-solving and decision-making skills from QS professionals. The rapid advancement of Artificial Intelligence (AI) presents an opportunity to enhance these skills by integrating AI-driven solutions into contract administration processes. This study aims to evaluate the potential of AI in augmenting QS competencies across the pre-contract, post-contract, and contract closure phases. A mixed-method approach will be adopted, combining qualitative interviews with QS professionals and AI-based analyses of contract administration challenges. The research will assess AI's capabilities in automating document review, risk assessment, and contract compliance monitoring while recognizing its limitations in interpreting legal complexities and contextual nuances. The findings will determine how AI can enhance QS efficiency in contract administration while emphasizing the necessity of human expertise for complex decision-making. This study underscores the importance of technological adaptation among QS professionals, equipping them with AI-enhanced analytical, problem-solving, and decision-making skills. By investigating the synergy between AI and QS expertise, this research contributes to the evolving body of knowledge on enhancing problem solving and decision-making skills with AI-driven in contract administration, highlighting its potential to improve transparency, reduce errors, and optimize administrative efficiency. The expected findings will benefit clients, contractors, and QS professionals, offering insights into the future of AI-powered contract management in the construction industry.

Keywords: Contract administration, Quantity Surveyors, Artificial Intelligent, Contract management

I. INTRODUCTION

Background Information

The construction industry plays a crucial role in economic and social development by providing essential infrastructure, commercial buildings, residences, and public facilities (Hosseini et al., 2018). However, it faces challenges such as complex cost management, labour shortages, project uncertainties, and risks of delays and budget overruns, requiring innovative solutions for sustainability and competitiveness (Love et al., 2020). Quantity surveyors play a key role in financial management, ensuring accurate cost estimation, budget control, contract documentation, and financial monitoring (Ashworth & Perera, 2018). Their tasks demand expertise in data analysis, precise calculations, and contract administration.

A Quantity Surveyor (QS) requires a diverse set of skills to effectively manage construction costs, contracts, and financial planning. One of the most crucial skills is cost estimation and budgeting, where a QS must prepare accurate estimates and forecasts to ensure financial control (Smith, 2021). Contract administration is another key competency, requiring knowledge of contract types such as FIDIC and JCT, as well as handling variations, claims, and disputes (Murdoch & Hughes, 2017). Measurement and Bill of Quantities (BoQ) preparation are also essential, demanding precision in quantity take-offs using standard methods of measurement like SMM (Willis & Trench, 2020). Additionally, a QS must be proficient in procurement and tendering, evaluating contractors and selecting

cost-effective solutions (Cartlidge, 2022). Value engineering and cost control help in optimizing project costs without compromising quality, while risk management ensures financial risks are mitigated effectively (Olanrewaju & Anavhe, 2021). Strong communication and negotiation skills are necessary for engaging with clients, contractors, and stakeholders (Brook, 2016). Furthermore, a QS must have a solid understanding of legal and regulatory frameworks to ensure compliance with construction laws (Chappell, 2018). Report writing and documentation are also vital, as QS professionals must generate financial reports, progress updates, and contractual documents (Ofori, 2019). Lastly, technological proficiency, especially in tools like Building Information Modeling (BIM) and cost management software, enhances efficiency and accuracy in QS work (Ghaffarianhoseini et al., 2017).

The integration of AI into the QS profession significantly strengthens these skills by automating processes, improving accuracy, and enabling data-driven decision-making (Li et al., 2021). AI-powered tools enhance cost estimation and budgeting by utilizing predictive analytics to forecast cost overruns and generate AI-driven BoQs (Zhang et al., 2022). In contract administration, Natural Language Processing (NLP) AI assists in contract review and risk assessment (Feng et al., 2020). AI-enabled digital take-off tools improve measurement and BoQ preparation, while AI-driven analytics optimize procurement and tendering by evaluating contractor performance and tender submissions (Deng et al., 2021). In value engineering and cost control, AI compares alternative materials and methods for cost efficiency (Pärn et al., 2019). AI-powered risk models help identify potential financial risks, and AI-driven claims analysis minimizes disputes (Shi et al., 2023). Moreover, AI enhances communication and documentation through automated report generation and AI chatbots for stakeholder interactions (Sun et al., 2020). It also supports legal and regulatory compliance by reviewing contract clauses for adherence to regulations (Agarwal et al., 2019). Additionally, AI-driven report writing and documentation tools streamline data summarization and financial reporting (Kamarudin et al., 2022). The integration of AI in BIM and digital construction facilitates real-time cost estimation and 5D BIM integration for cost management (Succar, 2017). By leveraging AI, QS professionals can significantly enhance their efficiency, accuracy, and strategic decision-making, making them more effective in managing construction costs and contracts (Kunz & Fischer, 2018).

Problem Statement

Quantity surveyors (QS) play a crucial role in construction, managing cost estimation, contract administration, procurement, and risk assessment. Their responsibilities require a high level of accuracy, efficiency, and analytical expertise to ensure that projects remain within budget and are executed smoothly. However, inefficient management can lead to delays, cost overruns, and errors affecting project quality (Zhao, 2020).

One of the primary challenges in contract management is dealing with unclear designs, short tender periods, and vague specifications, which often lead to disputes and financial inefficiencies (Winata & Hermawan, 2023). Frequent Contract Change Orders (CCOs) due to design modifications, extreme weather, and scope expansion significantly impact material supply, cash flow, labor management, and equipment usage (Ministry of Public Works, 2022; Kuswandari & Koesmargono, 2018). Additionally, failed tenders and contract terminations result from delayed bidding processes, a lack of qualified suppliers, and tight project schedules, disrupting project progress and financial stability (Ali, 2018).

To effectively manage these challenges, QS professionals must possess key competencies, including cost estimation, financial planning, procurement, contract administration, and risk management. Strong analytical skills are essential for accurate cost forecasting and budgeting, while contract management expertise ensures compliance with legal and financial obligations. Negotiation and communication skills are also critical for handling disputes, managing stakeholders, and ensuring seamless project execution. Furthermore, technological proficiency, especially in Building Information Modeling (BIM) and AI-driven cost estimation tools, enhances QS efficiency by automating calculations and reducing human errors.

A lack of these essential skills can lead to mismanagement of resources, incorrect cost estimates, poor contract administration, and failure to mitigate financial and operational risks. Without proper risk assessment and procurement strategies, projects may suffer from inefficient resource allocation, unexpected cost escalations, and disputes with contractors. Moreover, insufficient communication and negotiation skills can result in delayed conflict resolution, project disputes, and contract terminations, further affecting overall project success. Additionally, the inability to adopt AI and digital tools can hinder a QS's ability to improve efficiency and accuracy in modern construction practices.

The aim of this paper is to enhance the skills of quantity surveyors (QS) in contract administration by exploring the potential of artificial intelligence (AI) in this domain. Specifically, the study seeks to assess the accuracy and usability of AI in handling contract administration scenarios within the construction industry, comparing its effectiveness to that of experienced quantity surveyors. Additionally, the research aims to identify key differences

and similarities in problem-solving approaches between AI and human professionals in contract administration. By examining these aspects, the study intends to provide insights into how AI can complement QS expertise, improving efficiency and decision-making in contract management.

II. LITERATURE REVIEW

Role of Quantity Surveyor

Quantity Surveyors play a vital role in managing the financial and contractual aspects of construction projects, ensuring cost-effectiveness and efficiency without compromising quality or schedule (Allan Ashworth et al., 2013). Their role spans three key phases: pre-contract, post-contract, and contract closure.

In the pre-contract phase, they prepare initial cost estimates, compile tender documents (Bill of Materials, pricing schedules, and conditions), analyse contractor bids, and assist clients in decision-making. They also identify financial risks and recommend mitigation strategies before finalizing contract documents.

In the post-contract phase, they monitor project costs, process interim payments, and manage variations in work scope. They assess financial implications, prepare progress claims, resolve cost disputes, and ensure quality control to maintain compliance with specifications.

The contract closure phase involves finalizing project accounts, ensuring correct final payments, and overseeing the Defects Liability Period (DLP) for defect rectification. They audit project documents, release retention payments, and document project learnings for future reference.

Contract Administration Issues

Contract administration in construction ensures that projects are executed according to agreed terms, with quantity surveyors playing a key role in cost control, progress monitoring, and ensuring payments are made based on work milestones. They also manage risks by identifying potential issues early and recommending preventive measures, handling work variations, and assessing their impact on cost and time. Their role is crucial in keeping projects within budget and meeting required standards (Norman Othman, 2014).

However, issues such as payment delays, poorly managed design changes, and inaccurate cost estimations can disrupt project flow. Scope changes, whether due to unforeseen circumstances or design modifications, can significantly impact the project schedule and budget (Wannoorshidah, 2017). Therefore, quantity surveyors play a vital role in ensuring smooth project execution, budget adherence, and quality compliance. Common contract administration issues occur across three key phases: pre-contract, post-contract, and contract closure.

Pre-Contract Phase

The pre-contract phase is the initial step in the execution of a construction project. However, several issues frequently arise that can significantly impact the project's success. One of the main problems is incomplete or unclear documentation. During this phase, tender documents such as technical specifications, design drawings, and scope of work must be prepared meticulously and clearly. However, a lack of information in these documents often leads to confusion among contractors and project stakeholders. This lack of clarity can result in errors in cost estimation and inaccurate planning (Fong & Choi, 2020).

Another common issue is errors in cost estimation. Unrealistic or inaccurate cost estimates can pose significant financial risks. If the cost estimation is too low, it can lead to insufficient funds throughout the project, whereas an excessively high estimate can result in unnecessary expenditures. Therefore, accurate cost estimation is critical to ensuring the project budget is adhered to (Akintoye, 2000).

Furthermore, the selection of an unsuitable contractor is a frequent challenge. A lack of thorough contractor evaluation can lead to the selection of an incompetent or inexperienced contractor. This can hinder smooth project execution, leading to delays and additional costs (Hatush & Skitmore, 2017). Another issue that often arises is ambiguity in contract terms and conditions. Unclear contract terms can cause misunderstandings among involved parties, potentially leading to conflicts during project execution (Jaffar et al., 2011).

Delays in preparing tender documents are also a major issue, affecting the overall project schedule. Such delays can cause late project commencement, which may lead to difficulties in meeting project timelines (Doloi et al., 2012).

Post-Contract Phase

In the post-contract phase, various issues related to project execution often arise, which can significantly impact the overall project. One of the major issues is project delays, which may be caused by various factors such as logistical challenges, labor shortages, or unplanned changes in the scope of work. These delays not only disrupt the established schedule but can also lead to unexpected additional costs (Rahman et al., 2020).

Furthermore, variations and changes in design or scope of work are common in construction projects. However, these changes often occur without appropriate cost estimations. Without strict control, poorly managed variations can result in significant cost overruns, affecting the project budget (Smith & Love, 2019).

Payment issues are also a frequent challenge in this phase. Delays in payments to contractors or subcontractors can disrupt workflow, as they may face financial difficulties in continuing the project execution. Payment delays can cause tensions between contractors and clients, and in some cases, projects may experience temporary suspension due to financial constraints (Nguyen & Skitmore, 2021).

Claims and disputes are also common, particularly when contractors or subcontractors submit additional cost claims that are not properly resolved. Without clear resolutions, these claims can create conflicts among stakeholders, hindering project progress (Cheung et al., 2018). Additionally, poor quality control is another concerning issue in the post-contract phase. Lack of monitoring on work quality can lead to non-compliance with specified standards, potentially having a negative impact on project outcomes (Love et al., 2022).

Contract Closure Phase

The contract closure phase is the final stage in the project lifecycle, where all aspects of the project must be completed, and closure documents must be submitted. Delays in submitting closure documents are a common issue. Documents such as the final assessment report, completion certificates, or financial records must be prepared accurately and on time. These delays can cause difficulties in fulfilling contractual obligations and hinder the smooth closure of the project (Meng, 2012).

Disputes regarding outstanding work or defects also frequently occur. Before project closure, all defects or incomplete work must be fully resolved. These issues can create tensions between contractors and clients, affecting the final completion of the project (Love et al., 2000). Additionally, retention issues often arise after the defects liability period. Disputes over retention payments may occur if there is uncertainty regarding the completed work, leading to complications in closing the contract (Hughes et al., 2015).

Audits and final account settlements also present challenges that can delay the completion of project accounts. Errors or delays in preparing the final account can create difficulties in determining the project's actual cost, further complicating the contract closure process (Ashworth et al., 2013).

Table 1.0 Common Contract Administration Issues

Contract Phase	Contract Administration Issues	Author/References
Pre-Contract	1.Incomplete or unclear documents	(Allan Ashworth et al., 2013)
	2.Errors in cost estimation	(Allan Ashworth et al., 2013)
	3.Selection of unsuitable contractors	(Hatush & Skitmore, 1997)
	4. Ambiguity in terms and conditions	(Allan Ashworth et al., 2013)
	5. Delays in tender preparation	(Martin Brook, 2017)
Post-Contract	1.Project execution delays	(Martin Brook, 2017)
	2.Variations and changes without effective cost control	(Allan Ashworth et al., 2013)

	3. Payment issues for contractors or subcontractors	(Hatush & Skitmore, 1997)
	4. Unresolved additional cost claims and disputes	(Allan Ashworth et al., 2013)
	5. Poor quality control over work output	(Martin Brook, 2017)
Contract Closure	1. Delays in submitting closure documents such as final reports and completion certificates	(Allan Ashworth et al., 2013)
	2. Disputes over outstanding work or defects	(Hatush & Skitmore, 1997)
	3. Retention payment issues after the defects liability period	(Allan Ashworth et al., 2013)
	4. Errors or delays in preparing the final account	(Martin Brook, 2017)

Problem-Solving in Contract Administration by Quantity Surveyors

Problem-solving in contract administration by Quantity Surveyors is a crucial aspect in ensuring the smooth execution and success of a construction project. Quantity Surveyors play a key role in managing all contract-related matters, including planning, cost management, and compliance with contract terms. They are responsible for ensuring that all contractual processes are carried out in accordance with the agreed terms, preventing any issues or conflicts that may arise among the involved parties. The approach taken by Quantity Surveyors in solving contract administration issues is divided into three phases: pre-contract, post-contract, and contract closure.

Pre-Contract Phase

In the pre-contract phase, incomplete or unclear documentation is a common issue. Missing information in tender documents, such as technical specifications or design drawings, can cause confusion and project risks. Quantity Surveyors ensure all documents are complete, clear, and accurate before issuing the tender (Mark Spender, 2024).

Errors in cost estimation can also impact the budget. Quantity Surveyors provide detailed cost estimates based on past project data and relevant information (Draleti et al., 2024). They also assess contractors' capabilities and experience to ensure smooth project execution (Raza Khoso & Md Yusof, 2024).

Misinterpretation of contract terms is another challenge. Quantity Surveyors clarify all terms to prevent misunderstandings (Dennis F. Turner, 2013). Lastly, delays in tender preparation can affect the project timeline, so Quantity Surveyors must ensure timely document submission (Metroun, 2024).

Post-Contract Phase

In the post-contract phase, issues like project delays due to logistics, labour shortages, or scope changes arise. Quantity Surveyors monitor progress and collaborate with contractors to keep the project on schedule (Ir. Hj. Redzuan Ab. Rahman, 2018).

Variations and scope changes without cost control are common. Quantity Surveyors manage changes through approved processes and cost control (Buletin Bernama, 2024). Payment delays to contractors can also disrupt projects, so Quantity Surveyors ensure payments follow proper documentation and standards (Nur Fatin Zahra, 2024).

Unresolved cost claims and disputes are frequent. Quantity Surveyors handle claims fairly using contracts and documentation (Keith Potts, 2008). Weak quality control affects outcomes, so Quantity Surveyors conduct inspections and ensure work meets specifications (Oluwatosin & Egbebi Adeleke, 2024).

Contract Closure Phase

In this phase, Quantity Surveyors address delays in submitting closure documents, ensuring all required reports and certificates are completed on time (Abdull Manaf, 2010). They also manage disputes over outstanding work or defects, ensuring compliance with contract terms (Alan Griffith & Paul Watson, 2004). Retention payment issues

after the defect liability period are resolved by verifying proper payments (University College of Estate Management, 2024).

Additionally, they ensure accurate final accounts by reviewing all project costs (Lee et al., 2014). Overall, Quantity Surveyors play a key role in ensuring projects are completed on time, within budget, and to the required quality standards.

The Potential of Artificial Intelligence in Solving Contract Administration Issues

AI is transforming contract administration by improving efficiency and accuracy. Contracts often face challenges such as human errors, review difficulties, and compliance delays. AI automates contract drafting and review using NLP, ensuring accuracy and reducing errors. AI-powered automation can cut contract processing time by 70% (Gartner, 2020).

AI enhances document management by categorizing and organizing contracts efficiently. It identifies key contract details, ensuring compliance with terms. AI also analyzes risks by detecting patterns in past contracts, providing early warnings about potential issues like execution delays or non-compliance.

AI-driven virtual assistants, such as ChatGPT, support contract administration by providing real-time information, answering queries, and sending reminders for critical deadlines. A study by Joe Atkinson (2024) found that over 70% of companies using AI-based ChatGPT in contract management

Table 2.0 The Potential of Artificial Intelligence in Solving Contract Administration Issues.

AI Potential	Author/References
Automation of Document Processing	(Joe Atkinson, 2024)
Improved Risk Management	(Mohd Azis, 2021)
Automated Dispute Resolution and Mediation	(McKinsey, 2024)
Increased Accuracy in Contract Analysis	(Aswan Awang, 2023)
Reduced Query Resolution Time	(Sinar Harapan, 2024)
Improved Customer Service Quality	(Sinar Harapan, 2024)
Enhanced Efficiency via AI Chatbots for Contract Queries	(Joe Atkinson, 2024)
Simplification of Contract Evaluation and Approval Processes	(McKinsey, 2024)
Machine Learning for Contract Requirement Forecasting	(Sinar Harapan, 2024)
Managing Uncertainty in Contract Negotiation Processes	(Mohd Azis, 2021)

III. RESEARCH METHOD

This study employs a mixed-method research approach, integrating both quantitative and qualitative methods to ensure a comprehensive analysis of artificial intelligence (AI) and quantity surveyors (QS) in contract administration within the construction industry. This approach is designed to achieve the research objectives by leveraging the strengths of both methods, enabling a thorough comparison of AI and QS in terms of accuracy, usability, and problem-solving approaches.

The quantitative component of the study addresses the first objective: assessing the accuracy and usability of AI compared to experienced QS in handling contract administration scenarios. This is achieved through a structured questionnaire designed to collect measurable data, which will be statistically analyzed to identify patterns and trends. The questionnaire evaluates AI-generated contract administration solutions against those provided by QS professionals, allowing for a direct comparison of their effectiveness and reliability.

The qualitative component supports the second objective: identifying key differences and similarities in problem-solving approaches between AI and QS. To achieve this, semi-structured interviews are conducted with experienced QS professionals and experts in contract administration. These interviews provide deeper insights into the reasoning, decision-making processes, and contextual factors influencing QS approaches compared to AI-driven solutions. The qualitative findings help to explain the rationale behind the results observed in the quantitative analysis, offering a richer understanding of AI's role in contract administration.

By integrating quantitative data with qualitative insights, this mixed-method approach ensures that the study not only provides objective, statistically valid findings but also captures the nuanced perspectives of professionals in contract administration. This methodological design enhances the robustness of the research, contributing to a more informed evaluation of AI's potential to enhance QS skills in contract administration.

IV. EXPECTED OUTCOME

This research is expected to demonstrate that artificial intelligence (AI) can serve as a valuable tool in enhancing the skills of quantity surveyors (QS) in contract administration. By evaluating the accuracy and usability of AI-generated solutions compared to those provided by experienced QS professionals, the study aims to highlight AI's potential in streamlining contract administration tasks, improving decision-making efficiency, and reducing human error. Additionally, the research will identify key differences and similarities in problem-solving approaches, providing insights into how AI can complement QS expertise rather than replace it. The findings are anticipated to show that while AI can efficiently process large datasets, automate routine tasks, and offer quick recommendations, human expertise remains essential for contextual judgment, negotiation, and risk management. Ultimately, this study is expected to reinforce the idea that AI, when integrated effectively, can support QS professionals in making more informed decisions, optimizing contract administration processes, and enhancing overall industry efficiency.

CONCLUSION

This study explores the role of artificial intelligence (AI) in contract administration and its potential to enhance the skills of quantity surveyors (QS). Through a comparative analysis of AI and QS professionals, the research evaluates AI's accuracy, usability, and problem-solving approaches in handling contract administration scenarios. The findings are expected to reveal that AI can significantly assist QS professionals by automating routine tasks, analyzing complex data sets, and providing efficient contract management solutions. However, AI's capabilities must be balanced with human expertise, as contextual understanding, critical judgment, and strategic decision-making remain key strengths of QS professionals. By leveraging AI as a supportive tool, QS practitioners can enhance their efficiency, reduce administrative burdens, and focus on higher-value tasks. This research contributes to the ongoing discussion on AI adoption in the construction industry and underscores the importance of integrating AI with professional expertise to optimize contract administration practices.

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