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MAPPING GLOBAL RESEARCH ON CONSTRUCTION PROJECT SUCCESS: A BIBLIOMETRIC ANALYSIS AND FUTURE DIRECTIONS

Abdul Ghafur Hanafi[1*], Nor Izham Subri[2], Najuwa Nasir[3], Risydah Fadilah[4]

[1] Faculty of Business and Management Sciences, Universiti Islam Antarabangsa Tuanku Syed Sirajuddin (UniSIRAJ) Perlis, Malaysia
Email: ghafur@unisiraj.edu.my
[2] Faculty of Business and Management Sciences, Universiti Islam Antarabangsa Tuanku Syed Sirajuddin (UniSIRAJ) Perlis, Malaysia
Email: izham@unisiraj.edu.my
[3] Faculty of Business and Communication, Universiti Malaysia Perlis, Kangar, Perlis, Malaysia
Email: najuwa@unimap.edu.my
[4] Magister Psikologi, Universitas Medan Area, Medan, Sumatra Utara, Indonesia.
Email: risydah@staff.uma.ac.id
[*] Corresponding Author

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Abstract:

This study presents a comprehensive bibliometric analysis titled "Mapping the Intersection of Construction Project Success: A Bibliometric Analysis of Global Research Trends and Future Directions," aimed at identifying research patterns, key contributors, and emerging directions in the field of construction project management and project success. Despite the growing body of literature on this topic, a systematic overview of the intellectual structure and global trends remains limited. Addressing this gap, the study applies a rigorous data collection process using the Scopus database, guided by the search terms "construction project management" and "project success." The search was restricted to journal articles published in English between 2000 and 2025, resulting in a final dataset of 432 articles. The data was refined using OpenRefine to ensure consistency, while Scopus Analyzer and VOSviewer software were employed to map co-authorship, keyword co-occurrence, and citation networks. The results reveal that the keywords "construction industry," "critical success factors," "project success," and "project management" are the most frequently occurring, highlighting the dominant themes in the field. The United Kingdom, Malaysia, and Australia emerged as the top contributing countries, with notable citation impacts from regions like Hong Kong and Australia. Additionally, authorship and institutional collaboration patterns were examined, revealing productive scholars and influential affiliations. The analysis identifies gaps in geographical coverage and recommends further

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research in developing economies and emerging technologies. In conclusion, this study not only offers a structured insight into the evolution of construction project success literature but also proposes future research directions that can enhance global knowledge, support policy-making, and guide practitioners toward more effective project outcomes.

Keywords:

Construction Project Success, Project Performance, Construction Management, Project Management, Bibliometric Analysis

Introduction

The construction industry plays a pivotal role in the economic and industrial development of countries, making the success of construction projects crucial for national progress. Despite the traditional belief that a project is successful if it meets the "iron triangle" criteria of time, cost, and quality, evidence suggests that these factors alone are insufficient to guarantee project success. Consequently, the industry has shifted focus towards identifying and ranking critical success factors (CSFs) that significantly impact project outcomes. These factors encompass a wide range of elements, including project management competence, client satisfaction, risk management, and safety, among others. The identification and effective management of these CSFs are essential for improving project performance and achieving desired results.

Recent studies have highlighted the importance of comprehensive performance measurement systems that incorporate both financial and non-financial metrics to evaluate project success. Key Performance Indicators (KPIs) are widely used in the construction industry to monitor and assess various aspects of project performance, such as construction time, profitability, quality assurance, and client satisfaction. These indicators provide valuable insights into the efficiency and effectiveness of project management practices, enabling stakeholders to make informed decisions and implement corrective actions when necessary. As the construction industry continues to evolve, the integration of advanced technologies and innovative management approaches will be critical in addressing the challenges of modern construction projects and ensuring their successful completion.

Literature Review

The concept of construction project success has evolved significantly beyond the traditional focus on cost, time, and quality, often referred to as the "iron triangle". Scholars have increasingly emphasised the need to incorporate non-tangible aspects such as stakeholder satisfaction, project sustainability, and long-term value creation in defining project success. This broader perspective is crucial, especially in complex projects involving multiple stakeholders with diverse expectations and priorities. Consequently, success criteria and success factors have become major areas of inquiry, with researchers attempting to establish frameworks that reflect the dynamic and multidimensional nature of modern construction projects.

Several studies have attempted to identify critical success factors (CSFs) that influence the achievement of project objectives. For instance, Pinto and Slevin's early work laid the foundation for categorising CSFs across strategic and operational domains. More recent research has extended these insights to include leadership style, communication effectiveness, client involvement, and technological innovation. In the context of developing countries, local

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socio-economic conditions and regulatory environments have also been identified as key determinants of project success. Despite these advancements, inconsistencies remain in how success is measured, highlighting the need for a more standardised and comprehensive understanding of success factors in different project contexts.

Bibliometric and scientometric approaches have been increasingly applied to map and analyse research trends in construction management. These methods provide a data-driven overview of scholarly output, citation impact, thematic evolution, and collaboration networks. For example, Li et al. conducted a bibliometric analysis to trace knowledge development in project complexity studies, revealing research hotspots and methodological gaps. Similarly, studies by Zou et al. and Zhao et al. explored the landscape of risk management and Building Information Modelling (BIM) through bibliometric mapping, offering insights into influential publications and global research patterns. However, despite the growing use of bibliometric techniques, there is limited comprehensive analysis specifically focused on the domain of construction project success.

The lack of a consolidated bibliometric study on construction project success limits our ability to understand the field's knowledge structure and identify emerging trends. While narrative reviews and meta-analyses have provided valuable insights, they often rely on subjective interpretation and are constrained by limited sample sizes. A bibliometric analysis, by contrast, enables a more objective and systematic evaluation of a large volume of literature, highlighting influential authors, institutions, and thematic clusters. This study addresses this gap by offering a global bibliometric overview of construction project success research, to identify intellectual foundations, current research directions, and future opportunities for advancing the field.

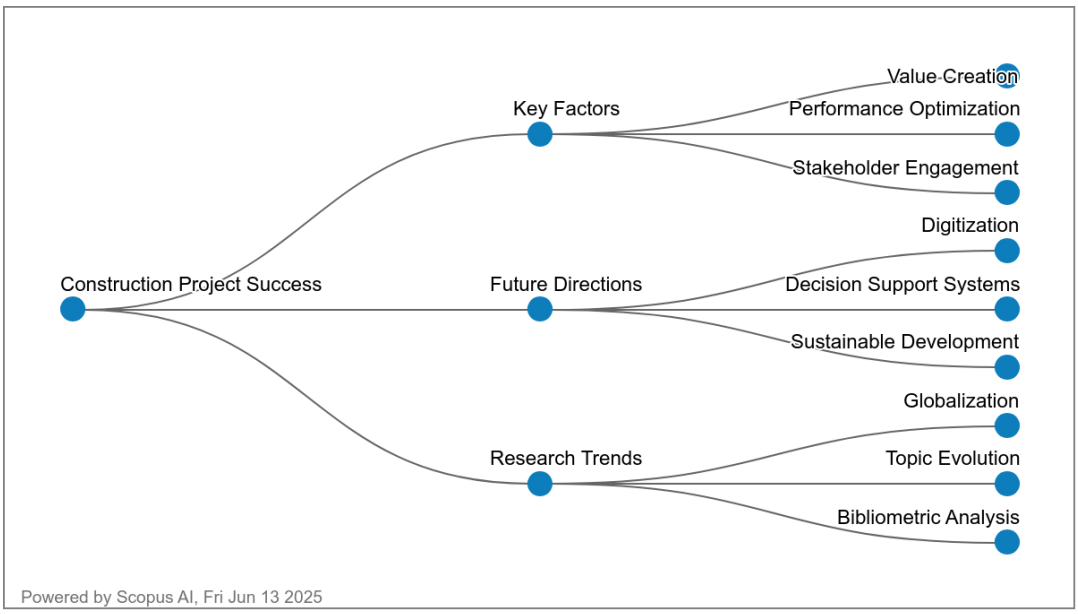

Figure 1: Overview of Literature Map

The construction industry is vital to national development, and understanding what drives construction project success has evolved beyond the traditional "iron triangle" of time, cost, and quality. Modern research emphasises critical success factors (CSFs) such as leadership, communication, client satisfaction, and risk management, as well as comprehensive

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performance measures like Key Performance Indicators (KPIs). Literature now considers intangible elements like stakeholder satisfaction and sustainability, reflecting the complexity of today's projects. Despite numerous studies, there remains an inconsistency in measuring success. Bibliometric analysis has emerged as a robust method to objectively explore scholarly trends and gaps. However, no comprehensive bibliometric study specifically addresses construction project success. This study aims to fill that gap by mapping global research output, identifying key contributors and themes, and offering insights to guide future investigations.

Research Question

- What are the prevailing research trends and thematic focuses in the field of construction project management success?
- Which are the top 10 most cited articles contributing to the literature on construction project success?
- Which countries lead in terms of research output on construction project success, and what are the top 10 based on publication volume?
- Who are the most prolific authors in this research domain, and what are their institutional and geographical affiliations?
- Which journals or publication sources have made the most significant contributions to the body of knowledge in construction project success?

Methodology

Bibliometric analysis is a quantitative method used to evaluate and analyse scientific literature. It involves various techniques such as citation analysis, co-citation analysis, and keyword analysis to map the research landscape, identify trends, and measure the impact of research outputs. This method is particularly useful for understanding the evolution of a field, identifying influential authors and journals, and uncovering emerging research areas. Bibliometric analysis has been applied to study the success factors in construction projects. This involves analysing a large body of literature to identify critical success factors (CSFs) and key performance indicators (KPIs) that contribute to project success.

Data Searching

Data searching in bibliometric analysis is the process of formulating search strategies to identify and extract relevant scholarly publications from scientific databases (e.g., Scopus, Web of Science, Dimensions) using keywords, timeframes, subject areas, and other filters, to build a dataset for quantitative analysis of research trends, authorship, citations, and thematic structures.

In conducting this bibliometric study on construction project success, the data search strategy was rigorously defined to ensure relevance, quality, and consistency. The Scopus database was selected due to its comprehensive coverage of peer-reviewed literature. An advanced search string was applied: TITLE (construction AND project AND success) with filters limiting the results to journal articles (DOCTYPE = "ar"), English language publications, and source type set as journals (SRCTYPE = "j"). This approach was adopted to focus solely on scholarly articles that directly address the topic in their titles, thereby ensuring the precision of the dataset for bibliometric mapping and trend analysis.

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Table 1: The Searching String

TITLE (construction AND project AND success) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SRCTYPE , "j"))

To further refine the dataset, specific inclusion and exclusion criteria were implemented. The inclusion criteria accepted only English-language publications, within the timeline of 2000 to 2025, and journal articles as the literature type. Exclusions were made for non-English works, publications before the year 2000, and non-journal sources such as conference papers, books, and reviews. These parameters were chosen to enhance the validity and comparability of the findings by focusing on peer-reviewed, high-impact research outputs. After filtering and screening, a total of 432 documents were identified as the final dataset for analysis, forming the basis for trend exploration, citation analysis, author productivity, and network visualisations in the field of construction project success.

Table 2: The Selection Criteria for Searching

Criteria	Inclusion	Exclusion
Language	English	Non-English
Time Line	2000-2025	< 2000
Literature Type	Journal	Conference, book, Review

Result And Discussion

Bibliographic analysis is a valuable methodological approach that facilitates the organised and comprehensive examination of data. This technique not only enhances the efficiency of research processes but also enables researchers and readers to visualise data and results in a manner that is both engaging and accessible. By employing bibliographic analysis, scholars can effectively interpret and communicate research findings, thereby contributing to the advancement of knowledge within their respective fields.

Document Published by Year

The chart illustrates the annual publication trend related to construction project success from 2001 to 2025. It shows a gradual increase in scholarly output over the years, with relatively low and fluctuating activity between 2001 and 2015. A noticeable upward trend begins around 2016, with significant growth from 2019 onward. Peak publication occurred in 2024 with over 60 documents, indicating heightened academic interest and research activity in recent years. Although there is a drop in 2025, this is likely due to incomplete data for the current year. Overall, the chart reflects a strong and growing global research focus on construction project success.

If this study were not conducted, we might not fully recognise that the field of research concerning construction success factors has been steadily increasing in prominence over the years. The growing attention to this area of study highlights the significance of understanding the elements that contribute to successful construction projects, thereby promoting enhanced practices and outcomes within the industry.

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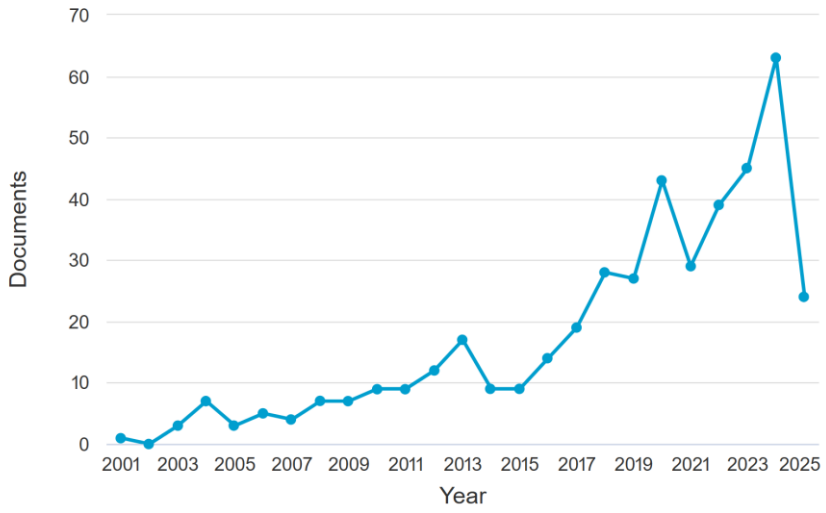

Figure 2: Document Published by Year

Document Published by Subject Area

Document Published by Subject Area refers to the distribution of academic publications across different fields of study, such as Medicine, Engineering, Social Sciences, or Computer Science. This type of analysis categorizes research outputs based on their subject classification—often derived from databases like Scopus, Web of Science, or institutional metadata—to reveal which disciplines are most active in producing scholarly work. It helps identify dominant research areas, emerging fields, and knowledge production trends within a given dataset, institution, or country, providing insights into intellectual focus and resource allocation in scientific endeavors.

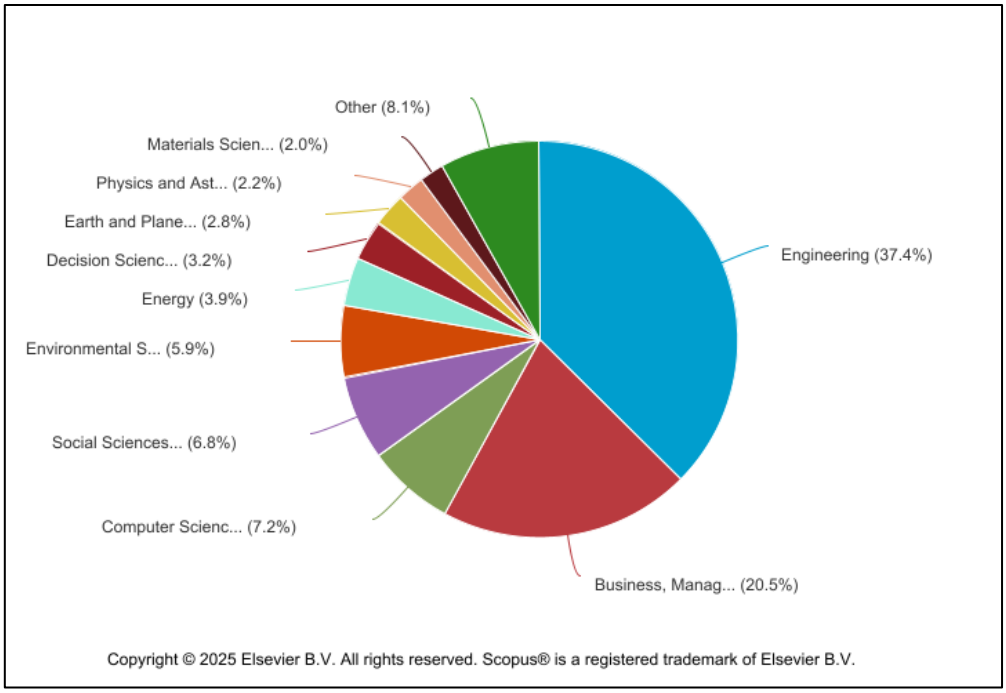

Figure 3: Document by Subject Area

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The pie chart in Figure 2 illustrates the disciplinary distribution of publications related to construction project success, based on data indexed by Scopus. The largest share of research output comes from the Engineering field, accounting for 37.4% of the total publications, reflecting the technical and structural core of construction-related studies. This is followed by Business, Management, and Accounting at 20.5%, indicating a substantial focus on organisational, financial, and strategic factors that influence project success. Other notable contributors include Computer Science (7.2%), Social Sciences (6.8%), and Environmental Science (5.9%), suggesting an interdisciplinary approach to studying construction success.

Smaller proportions of the research come from areas such as Energy (3.9%), Decision Sciences (3.2%), Earth and Planetary Sciences (2.8%), Physics and Astronomy (2.2%), and Materials Science (2.0%), which typically contribute to specific technical or contextual aspects of construction projects. The "Other" category (8.1%) encompasses a variety of disciplines not individually represented, indicating the broad academic interest in construction project outcomes. Overall, the chart highlights the dominance of engineering and business disciplines while emphasising the increasingly interdisciplinary nature of the field, incorporating technical, managerial, environmental, and social perspectives.

Table 3: Document Subject Area by Percentage

SUBJECT AREA	Documents	%
Engineering	313	37.44%
Business, Management and Accounting	171	20.45%
Computer Science	60	7.18%
Social Sciences	57	6.82%
Environmental Science	49	5.86%
Energy	33	3.95%
Decision Sciences	27	3.23%
Earth and Planetary Sciences	23	2.75%
Physics and Astronomy	18	2.15%
Materials Science	17	2.03%
Economics, Econometrics and Finance	16	1.91%
Chemical Engineering	14	1.67%
Mathematics	8	0.96%
Arts and Humanities	6	0.72%
Medicine	5	0.60%
Agricultural and Biological Sciences	4	0.48%
Chemistry	4	0.48%
Multidisciplinary	4	0.48%
Psychology	4	0.48%
Biochemistry, Genetics and Molecular Biology	3	0.36%

Table 3 reveals the diverse disciplinary engagement in research on construction project success, led overwhelmingly by Engineering (37.44%), which aligns with the field's foundational importance in construction methodologies, design, and execution. Business, Management, and Accounting (20.45%) emerges as the second-largest contributor, emphasising the growing academic focus on strategic planning, risk management, project financing, and organizational

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performance within construction projects. Meanwhile, Computer Science (7.18%) and Social Sciences (6.82%) point to the rising significance of digital technologies, data analytics, human factors, and behavioural insights in shaping successful project outcomes.

Interestingly, while traditional STEM domains dominate, the presence of Environmental Science (5.86%), Energy (3.95%), and Decision Sciences (3.23%) reflects an increasing concern for sustainability, energy efficiency, and informed decision-making in project execution. Contributions from fields such as Economics, Mathematics, Psychology, and even Arts and Humanities—although smaller in proportion suggest a growing interdisciplinary dialogue, acknowledging that construction success is influenced by socio-economic, cultural, and psychological dimensions, in addition to technical and managerial factors. This diversity in subject areas underscores the complexity of construction projects and the necessity for cross-disciplinary collaboration to understand and improve project success comprehensively.

Publication by Country

Analysing the global distribution of publications through the use of an infographic provides a comprehensive visualisation of the research outcomes. This representation distinctly illustrates that the subject of the study garners international interest and is relevant across diverse geographical regions, rather than being limited to a specific country or continent.

The world map in Figure 5 below illustrates the geographical distribution of scholarly contributions to research on construction project success, highlighting the top contributing countries through distinct colour coding. Notably, Malaysia stands out as the global leader, with 68 publications, reflecting its academic and institutional emphasis on improving project delivery and outcomes in a developing economy context. This is visually supported by its highlighted position in Southeast Asia. The United States and United Kingdom, each with 37 publications, also play a significant role, suggesting continued leadership from developed economies in advancing construction management research through well-established academic infrastructures.

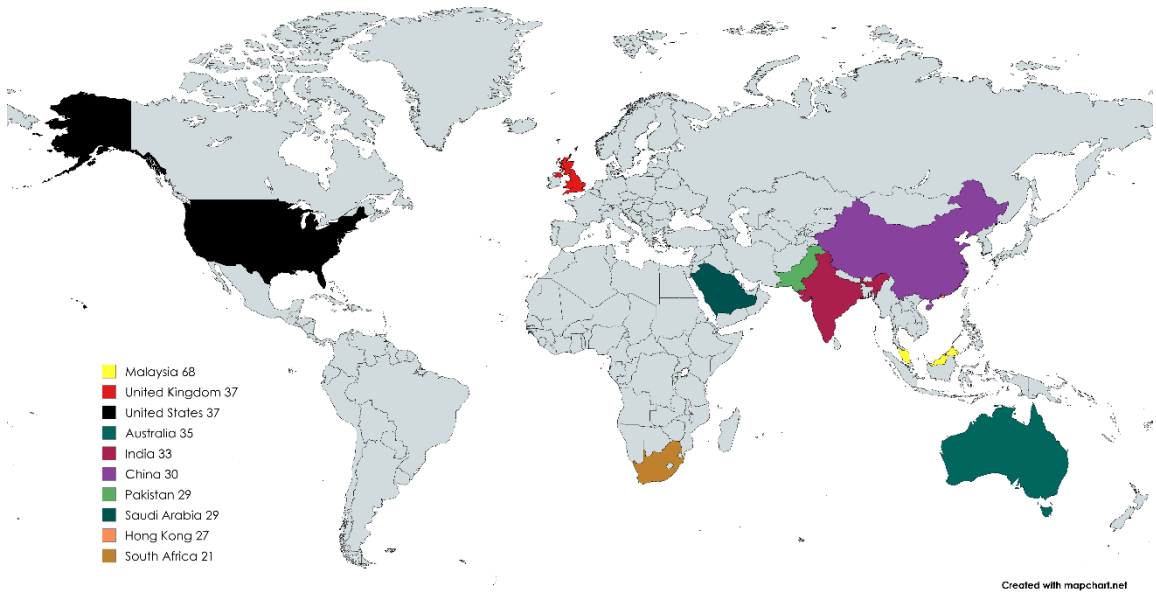

Figure 4: Publish Research by Country

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The map also shows strong regional participation from Asia-Pacific countries, including India (33), China (30), Pakistan (29), Saudi Arabia (29), and Australia (35), signifying their growing research capacity and the relevance of construction success within their national development agendas. Hong Kong (27) and South Africa (21) also contribute meaningfully, representing urban innovation hubs and emerging market contexts. The visualisation underscores the global scope and diversity of the field while also pointing to knowledge clusters in regions experiencing rapid infrastructure growth. Academically, this map provides a valuable spatial dimension to bibliometric analysis, enabling researchers to assess regional research strengths, potential collaboration zones, and disparities in global knowledge production on construction project success.

The data on country contributions shows that Malaysia leads globally in research output on construction project success, contributing 68 documents (11.13%), which highlights the country's strong academic and policy interest in improving construction outcomes, possibly due to its rapid infrastructure development and emphasis on project management excellence. The United States and the United Kingdom follow with 37 documents each (6.06%), reflecting the maturity of construction research and institutional capacity in these nations. Other significant contributors include Australia (5.73%), India (5.40%), and China (4.91%), indicating their active roles in global construction trends and scholarly discourse, likely driven by their expanding construction sectors and urbanisation challenges.

Table 5: Published Research by Country

Country/Territory	Documents	%
Malaysia	68	11.13%
United States	37	6.06%
United Kingdom	37	6.06%
Australia	35	5.73%
India	33	5.40%
China	30	4.91%
Pakistan	29	4.75%
Saudi Arabia	29	4.75%
Hong Kong	27	4.42%
South Africa	21	3.44%
Iran	18	2.95%
Egypt	14	2.29%
Indonesia	14	2.29%
United Arab Emirates	14	2.29%
South Korea	13	2.13%
Singapore	11	1.80%
Taiwan	11	1.80%
Ghana	10	1.64%
Thailand	10	1.64%
Jordan	10	1.64%
Iraq	10	1.64%
Less than 10 publications	130	21.28%

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The participation of countries like Pakistan, Saudi Arabia, Hong Kong, South Africa, and Iran, each contributing between 3% to 5%, shows growing engagement from emerging economies and regions with dynamic construction landscapes. Notably, nations such as Indonesia, UAE, South Korea, and Singapore also contribute meaningfully, reflecting regional efforts in Asia and the Middle East to improve construction efficiency and sustainability. The fact that countries with fewer than 10 publications still account for over 21% of the total output emphasises the broad global interest and diversity in construction project success research, while also pointing to opportunities for international collaboration and capacity-building in underrepresented regions.

Most Cited Article

Within the subsection designated as "Most Cited Articles," a compilation of distinguished authors and researchers who are authorities in this specific field of study is presented. Their research findings are extensively referenced by academics and scholars globally. This compilation also includes studies published in journals that are indexed by Scopus, highlighting their significance and impact in the academic community.

The analysis of the top 10 most cited articles in the field of construction project success reveals a strong emphasis on identifying critical success factors (CSFs) across various domains, geographies, and thematic areas. The most highly cited article by Li et al. with 622 citations underscores the significance of CSFs in Public-Private Partnership (PPP/PFI) projects in the UK, reflecting the maturity and complexity of procurement models in developed economies. Closely following are seminal works by Chan et al., which examine both general and partnering-specific CSFs in construction projects, collectively amassing 942 citations, indicating their foundational influence in project success literature. These early 2000s publications have set the benchmark for academic and practical understanding of project success factors.

Table 6: Most Cited Article

Authors	Title	Year	Source title	Cited by
Li B.; Akintoye A.; Edwards P.J.; Hardcastle C.	Critical success factors for PPP/PFI projects in the UK construction industry	2005	Construction Management and Economics	622
Chan A.P.C.; Scott D.; Chan A.P.L.	Factors affecting the success of a construction project	2004	Journal of Construction Engineering and Management	589
Chan A.P.C.; Chan D.W.M.; Chiang Y.H.; Tang B.S.; Chan E.H.W.; Ho K.S.K.	Exploring critical success factors for partnering in construction projects	2004	Journal of Construction Engineering and Management	353
Aksorn T.; Hadikusumo B.H.W.	Critical success factors influencing safety program performance in Thai construction projects	2008	Safety Science	337

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Banihashemi S.; Hosseini M.R.; Golizadeh H.; Sankaran S.	Critical success factors (CSFs) for the integration of sustainability into construction project management practices in developing countries	2017	International Journal of Project Management	334
Nguyen L.D.; Ogunlana S.O.; Lan D.T.X.	A study on project success factors in large construction projects in Vietnam	2004	Engineering, Construction and Architectural Management	296
Kiani Mavi R.; Standing C.	Critical success factors of sustainable project management in construction: A fuzzy DEMATEL-ANP approach	2018	Journal of Cleaner Production	272
Alzahrani J.I.; Emsley M.W.	The impact of contractors' attributes on construction project success: A post-construction evaluation	2013	International Journal of Project Management	255
Wu G.; Liu C.; Zhao X.; Zuo J.	Investigating the relationship between communication-conflict interaction and project success among construction project teams	2017	International Journal of Project Management	226
Lu W.; Yuan H.	Exploring critical success factors for waste management in construction projects of China	2010	Resources, Conservation and Recycling	200

The list also reflects the growing diversification of focus over time. More recent contributions include topics such as sustainability integration, contractor attributes, and communication-conflict dynamics, indicating an evolution from structural and procedural success factors to human, environmental, and relational dimensions of project success. Notably, articles from developing countries (e.g., Vietnam and China) highlight region-specific CSFs, suggesting that contextual factors significantly influence success metrics. The substantial citation counts across this range of studies show a broad and sustained interest in CSFs, demonstrating their central role in shaping effective construction project management strategies globally.

Authors Keywords

Studying authors' keywords in bibliometric analysis is essential because they offer direct insights into the core themes, concepts, and focus areas that researchers prioritise in their publications. Unlike indexed keywords, which are assigned by databases, authors' keywords reflect the authors' understanding of their work's relevance and contribution to the field. Analysing these keywords helps identify emerging research trends, shifts in thematic emphasis, and patterns of scholarly interest over time. Moreover, it supports the mapping of intellectual structures within a research domain, facilitates topic clustering, and reveals gaps or overlaps in the literature, making it a valuable tool for understanding the evolution and direction of academic inquiry.

The keyword analysis reveals that the construction industry, with the highest number of occurrences (219) and total link strength (429), serves as the dominant research domain within this dataset. Closely aligned with it are the terms critical success factors (123 occurrences) and

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project success (112), highlighting that researchers are extensively focused on identifying and evaluating the variables that contribute to successful construction projects. The strong presence of project management (89 occurrences) further reinforces the managerial orientation of this research field, indicating that successful project delivery is largely seen as a product of effective planning, leadership, and execution. These keywords are frequently co-cited, forming the conceptual backbone of construction project success literature.

Methodologically, tools like structural equation modelling (SEM) and factor analysis appear prominently, suggesting a strong preference for quantitative and statistically robust approaches in analysing project success determinants. Keywords such as sustainable construction and risk management suggest an emerging awareness of the broader impacts and uncertainties in construction projects, aligning with global shifts toward sustainability and resilience. Other notable terms like communication, contractor selection, and public–private partnership reflect the operational and stakeholder-oriented challenges frequently encountered in both developing and developed construction contexts.

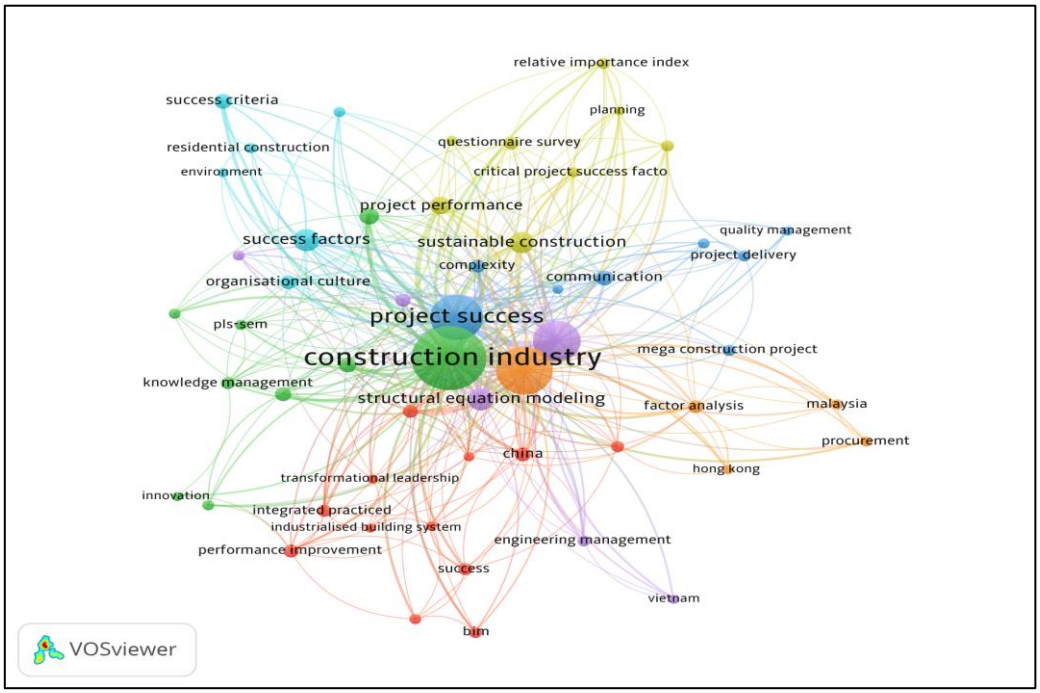

Figure 4: Authors' Keywords

The VOS viewer co-occurrence network visualisation reveals the interconnected thematic structure of research on construction project success. At the centre of the network, "construction industry" and "project success" emerge as the most dominant and highly connected nodes, indicating their foundational role in the literature. Closely linked clusters such as "success factors," "structural equation modelling," "communication," and "project performance" suggest that these topics are frequently discussed in tandem and form critical pillars of scholarly attention. The proximity and density of links between these nodes also reflect the multidisciplinary approach taken by researchers, combining project management, statistical modelling, and organisational behaviour to study project outcomes.

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Furthermore, the colour-coded clusters indicate distinct thematic groupings within the literature. For example, the green cluster emphasises project success criteria, contractor selection, organisational culture, and innovation, while the red cluster highlights themes like transformational leadership, industrialised building systems, and performance improvement, pointing to leadership and process innovation as success drivers. Meanwhile, geographically tagged keywords such as Malaysia, China, Hong Kong, and Vietnam appear in the periphery of the network, suggesting growing regional contributions that are starting to intersect with core global topics. The diagram effectively shows a complex and evolving research landscape, where diverse methodologies (e.g., AHP, PLS-SEM, factor analysis) and emerging themes like sustainable construction and stakeholder management are shaping the understanding of success in construction projects.

Co-Authorship by Country

Co-authorship by country refers to the analysis of collaborative scholarly publications involving researchers from different nations. It highlights patterns of international research partnerships and reflects how knowledge is co-produced across borders. In bibliometric studies, this type of analysis helps identify which countries are most active in global research networks and how they interact with others. For instance, if Malaysia and the United Kingdom frequently appear as co-authors in publications on construction project success, it indicates strong bilateral academic collaboration in this domain.

This analysis is significant because it reveals the extent and structure of international collaboration, which often leads to higher-quality research due to the combination of diverse expertise, perspectives, and resources. It also shows how scientific knowledge flows globally and which countries act as hubs of innovation or knowledge exchange. In construction-related research, where issues like sustainability, cost efficiency, and technology integration vary by region, such international co-authorship can enrich findings and make them more globally applicable. Overall, co-authorship by country not only measures collaboration but also reflects the interconnectedness of research communities and their collective contribution to solving complex, global challenges.

In terms of total link strength, a measure of a country's research collaboration and co-authorship networks United Kingdom (47) and Malaysia (42) share leading positions, showing active participation in global knowledge exchange. Saudi Arabia and Pakistan also demonstrate strong collaborative ties (42 and 40, respectively), despite lower citation counts, reflecting growing research engagement in developing contexts. Countries like China and the United States, while having high document and citation counts, exhibit relatively lower link strengths (33 and 24, respectively), possibly indicating more independent research efforts rather than collaborative endeavours. These findings emphasise the strategic importance of international research networks in enhancing academic visibility and cross-border knowledge transfer.

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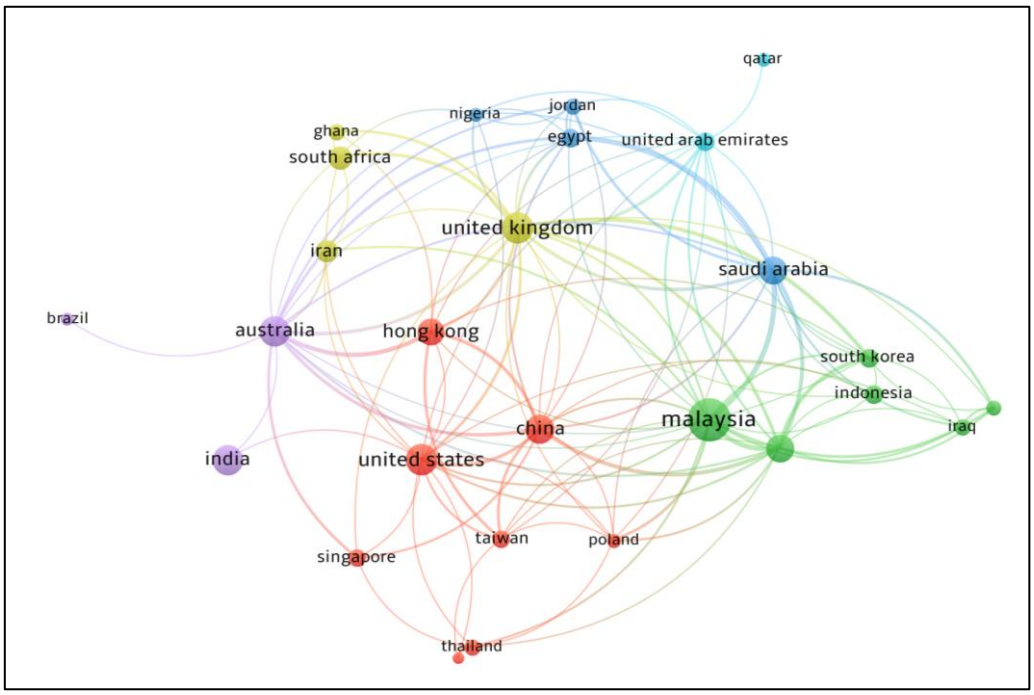

Figure 5: Co-Authorship by Country

The co-authorship network map illustrates international research collaboration by country. Each node represents a country, with node size reflecting the volume of collaborative publications, and the lines (edges) indicating the strength and frequency of co-authorship ties. Countries like Malaysia, China, the United States, and the United Kingdom are central and highly connected, indicating their prominent roles in global research partnerships.

Clusters of countries, distinguished by colour, reveal regional or linguistic collaboration patterns. For example, Malaysia is closely linked with Indonesia, South Korea, and Iraq, forming a green cluster, while China, the United States, and Hong Kong anchor a red cluster that includes Singapore and Thailand. The United Kingdom forms a yellow cluster with connections to South Africa, Ghana, and Iran, while Australia and India are grouped in a purple cluster. Peripheral countries such as Brazil, Poland, and Qatar have fewer links, suggesting less frequent international collaboration. Overall, the figure highlights the leading countries in research co-authorship, the existence of regional collaboration hubs, and areas where international partnerships could be strengthened.

Bibliographic Coupling by Countries

Bibliographic coupling by countries is a bibliometric method used to analyse the intellectual and thematic relationships between nations based on shared citation patterns in scientific publications. When two or more countries cite similar core literature in their research, they are considered bibliographically coupled, indicating that they are working within related research domains or drawing upon common knowledge bases. This approach helps map global research trends, identify clusters of countries with aligned scientific interests, and reveal potential opportunities for international collaboration by highlighting thematic affinities rather than direct co-authorship ties.

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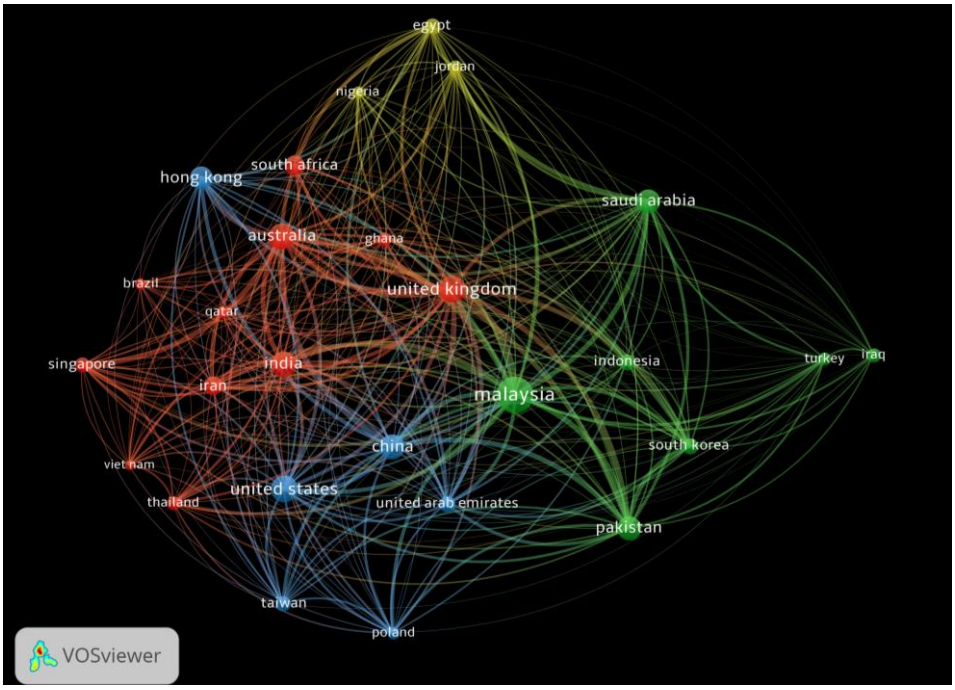

Figure 6: Bibliographic Coupling by Countries

The figure depicts a bibliographic coupling network among countries, where nodes represent individual nations and edges signify the strength of their bibliographic coupling based on shared citation patterns in scientific publications. The thickness and colour of the edges indicate the intensity of the coupling, with thicker lines representing stronger connections. This visualisation was likely generated using software such as VOSviewer, which is commonly used for bibliometric analysis.

At the centre of the network, the United Kingdom (UK) stands out as a highly connected node, suggesting that its research community shares a significant number of citations with researchers from numerous other countries. Other prominent nodes include the United States, China, Malaysia, and India, each exhibiting strong connections to multiple regions. These central nodes act as hubs within the network, indicating their influential roles in shaping global research agendas through shared knowledge bases. The network reveals distinct regional clusters, highlighting geographical and thematic similarities in research interests. For instance, countries in Southeast Asia, such as Malaysia, Indonesia, and Thailand, form a tightly connected sub-network, suggesting that they share common research themes or foundational literature. Similarly, Middle Eastern countries like Saudi Arabia, Qatar, and Iraq are closely linked, reflecting their collaborative focus on specific areas of study.

Additionally, European and Asian countries show overlapping connections, with the UK serving as a bridge between these regions. This indicates that while regional clusters exist, there are also cross-regional linkages driven by shared intellectual foundations. The presence of such clusters suggests that geographic proximity, cultural ties, or historical collaborations may influence the dissemination and adoption of similar research methodologies and theories across neighbouring nations.

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This bibliographic coupling network provides valuable insights into the dynamics of international research collaboration and knowledge diffusion. Countries with high centrality, such as the UK and the United States, play pivotal roles in shaping global research trends due to their extensive networks and shared citation patterns with diverse regions. These nations can serve as key intermediaries for knowledge transfer and collaboration, facilitating the exchange of ideas across continents. Conversely, smaller or less connected nodes may indicate countries that are either more isolated in their research efforts or have limited access to global research networks. This highlights the importance of fostering inclusive collaborations to ensure that all nations can contribute to and benefit from global scientific advancements. Policymakers and funding agencies can use such analyses to identify potential partners for targeted international collaborations, promote equitable knowledge sharing, and address gaps in research connectivity. Overall, this network underscores the interconnected nature of global research and the need for strategic initiatives to enhance intellectual cooperation across borders.

Conclusion

The objective of this study was to systematically examine the global research landscape concerning construction project success through a bibliometric analysis. The study aimed to explore prevailing research trends, identify the most cited works, recognise leading countries and authors in the field, and assess the contributions of various journals and institutions. By focusing on the intersection of construction project management and project success, the analysis sought to uncover the intellectual structure and evolution of scholarly work in this area.

The analysis revealed several important findings. Keywords such as “construction industry,” “critical success factors,” and “project success” appeared most frequently, indicating key themes that dominate scholarly discussions. Among the countries contributing to the literature, Malaysia, the United Kingdom, and Australia showed the highest volume of publications, while Hong Kong and Australia recorded significant citation impacts. The data also highlighted notable institutional collaborations and author productivity, pointing to a concentration of scholarly output in certain regions. The review of journals showed that a few core publications serve as central sources for the dissemination of influential work in the field.

This study contributes to the construction management discipline by offering a structured overview of its bibliometric dimensions, enabling clearer insight into the development, scope, and focus areas of existing research. The findings are useful in real-world settings as they can guide researchers, policymakers, and practitioners in aligning future work with areas of high relevance and impact. While the study was limited to journal articles in English and to data sourced solely from Scopus, it provides a strong foundation for further bibliometric investigations. Future research may consider incorporating multiple databases, examining additional document types, or applying longitudinal analysis to trace thematic shifts over time. Overall, bibliometric analysis proves to be a valuable tool in capturing the dynamics of scholarly attention and research direction within the realm of construction project success.

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commitment to academic inquiry and the betterment of student mental health in higher education.

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