Editorial

Tradition and Innovation in Construction Project Management

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1. Introduction and Aim of the Special Issue

Construction project management is a multidimensional discipline that requires meticulous consideration of various critical aspects, including cost, quality, schedule requirements, as well as social and environmental impacts, and broader stakeholder interests. In recent years, the field has encountered challenges and opportunities arising from the adoption of emerging technologies, novel materials, advanced methods and processes, and complex contractual arrangements. One notable example is the integration of Building Information Modelling (BIM) in project management, which has received considerable attention [1–3]. Consequently, construction project management is poised to leverage the benefits of digital transformation within the Industry 4.0 paradigm [4,5] while embracing new technologies and management systems to promote sustainable development [6,7].

The Special Issue of the *Buildings* journal, titled "Tradition and Innovation in Construction Project Management," serves as a platform to showcase cutting-edge international research and development in this important field. The issue aimed to explore the interplay between tradition and innovation in construction project management and identify new research studies and practices that harness the potential of digital technologies and drive sustainable development across the sector.

2. Commentary on the Published Papers

This Special Issue comprises 22 publications, consisting of 20 research articles and two review articles. Within a short period (as of June 2023), the issue has garnered over 30,000 views and received 45 citations, indicating its significant impact. With contributions from 101 co-authors representing 11 countries, this issue offers a global perspective on tradition and innovation in construction project management. The featured papers encompass a wide range of topics, employ diverse methodologies, and examine various geographical contexts, collectively providing valuable insights into the challenges and opportunities within the construction industry.

Table 1 presents a comprehensive summary of the 22 publications, categorizing them based on their general topic tag and specific topic tag. While some articles may address multiple topics, we have assigned a primary topic focus to each paper. Through this synthesis, we have identified five overarching topic groups: technology, management, outcome, product, and urban. This classification aids in organizing the papers and highlighting the main themes explored in this Special Issue.

The papers in this Special Issue unequivocally showcase technology's innovation and transformative potential in the construction industry. For instance, Hartmann et al. [8] utilized digitalization to optimize construction processes in a hospital construction project in Germany. B. Wang et al. [13] identified a significant difference in the efficiency of green technology innovation in the construction industry of the Chengdu-Chongqing metropolitan agglomeration, with an upward trend. H. Li et al. [18] explored the key factors influencing the digital transformation of the construction industry and developed a comprehensive

evaluation system. Doukari et al. [19] compared conventional and automated approaches to creating construction schedules using 4D BIM in real-world projects. Xu et al. [24] provided a systematic commentary on the state-of-the-art research on artificial neural networks in construction management, revealing insufficient attention and implementation challenges. Elrefaey et al. [28] investigated the impact of COVID-19 on the adoption of digital technology in construction projects in the UAE.

Table 1. The content of the Special Issue "Tradition and Innovation in Construction Project Management".

Authors	Manuscript Title	Article Type	General Topic Tag	Specific Topic Tag
Hartmann et al. [8]	Optimizing Interfaces of Construction Processes by Digitalization Using the Example of Hospital Construction in Germany	Research	Technology	Digitalization
Kumaraswamy et al. [9]	Accelerating the Delivery of Low-Carbon Buildings by Addressing Common Constraints: Perspectives from High-Rise, High-Density Cities	Research	Outcome	Low Carbon
Y. Wang et al. [10]	Risk Propagation Model and Simulation of an Assembled Building Supply Chain Network	Research	Management	Risk Management
H. Yan, Yang et al. [11]	Regret Theory and Fuzzy-DEMATEL-Based Model for Construction Program Manager Selection in China	Research	Management	Resource
Bailey et al. [12]	A Critical Scoping Review of Disability Employment Research in the Construction Industry: Driving Social Innovation through More Inclusive Pathways to Employment Opportunity	Research	Outcome	Social Equity
B. Wang et al. [13]	Spatiotemporal Differentiation and Influencing Factors of Green Technology Innovation Efficiency in the Construction Industry: A Case Study of Chengdu–Chongqing Urban Agglomeration	Research	Technology	Green Technology
Mridha et al. [14]	The Influence Innovation Has on the Visual Appearance and Aesthetic Preference of Architectural Products	Research	Product	Architecture
J. Zhang et al. [15]	Current and Future Trends of Resource Misallocation in the Construction Industry: A Bibliometric Review with Grounded Theory	Research	Management	Resource
Y. Li, Liang et al. [16]	Behavioral Research in Construction Engineering Management: A Review from a Neuropsychological Perspective	Review	Management	Behavior

Table 1. *Cont.*

Authors	Manuscript Title	Article Type	General Topic Tag	Specific Topic Tag
Huaman-Orosco et al. [17]	Barriers to Adopting Lean Construction in Small and Medium-Sized Enterprises—The Case of Peru	Research	Management	Lean Construction
H. Li et al. [18]	Systematic Identification of the Influencing Factors for the Digital Transformation of the Construction Industry Based on LDA-DEMATEL-ANP	Research	Technology	Digitalization
Doukari et al. [19]	The Creation of Construction Schedules in 4D BIM: A Comparison of Conventional and Automated Approaches	Research	Technology	Digitalization
Bahamid et al. [20]	The Current Risk Management Practices and Knowledge in the Construction Industry	Research	Management	Risk Management
Y. Li, Xie et al. [21]	Evaluation of Park Accessibility Based on Improved Gaussian Two-Step Floating Catchment Area Method: A Case Study of Xi'an City	Research	Urban	Assessment
J. Wang et al. [22]	Safety Risk Assessment of Prefabricated Buildings Hoisting Construction: Based on IHFACS-ISAM-BN	Research	Management	Risk Management
Y. Zhang et al. [23]	How Private Enterprises' Participation Behaviors Evolve with Incentive Modes in PPPs: An Evolutionary Game View	Research	Management	Behavior
Xu et al. [24]	Application of Artificial Neural Networks in Construction Management: A Scientometric Review	Review	Technology	Artificial Intelligence
L. Wang et al. [25]	A Real Estate Early Warning System Based on an Improved PSO-LSSVR Model—A Beijing Case Study	Research	Urban	Assessment
Yang et al. [26]	Organization Synchronization in Response to Complex Project Delays: Network-Based Analysis	Research	Management	Behavior
Huang et al. [27]	Safety Risk Assessment Using a BP Neural Network of High Cutting Slope Construction in High-Speed Railway	Research	Management	Risk Management
Elrefaey et al. [28]	Impacts of COVID-19 on the Use of Digital Technology in Construction Projects in the UAE	Research	Technology	Digitalization
H. Yan, Zheng et al. [29]	Risk Coupling Evaluation of Social Stability of Major Engineering Based on N-K Model	Research	Management	Risk Management

This Special Issue provides insights into the dynamic landscape of construction project management, thereby underscoring the significance of embracing innovative strategies and approaches to overcome challenges in the sector and ensure successful project delivery.

- Notably, risk management emerges as a prominent theme, with Y. Wang et al. [10] developing a risk propagation model for an assembled building supply chain network. Bahamid et al. [20] summarized risk management strategies in Yemeni building projects. J. Wang et al. [22] established a safety risk assessment framework based on Bayesian Network, improved Human Factors Analysis and Classification System, and improved the Similarity Aggregation Method. Huang et al. [27] proposed a safety risk assessment model using a BP neural network algorithm. Yan et al. [29] investigated the coupling evaluation method to analyze the influence of social stability risk factors in major projects;
- Furthermore, the inclusion of behavioral research signifies the growing recognition of understanding the behavior of contracting parties in projects. Y. Li et al. [16] employed a bibliometric analysis of 1254 studies from the Web of Science to explore behavioral research in construction engineering management. Y. Zhang et al. [23] revealed the evolutionary law of private enterprises' participation behavior under different incentive modes in Public–Private Partnership projects. Whereas, Yang et al. [26] established an index system of organization interactions to determine synchronizability and effective interaction methods;
- In the realm of resource management, Yan et al. [11] combined regret theory and the Fuzzy-DEMATEL method to develop a multi-attribute model for construction program manager selection. Additionally, J. Zhang et al. [15] analyzed the current state, consequences, and emerging trends in resource management research at the macroscopic level to explore potential solutions;
- Finally, this Special Issue delves into the domain of lean construction management, with Huaman-Orosco et al. [17] exploring barriers, challenges, and strategies for adopting lean practices in small and medium-sized enterprises.

The Special Issue sheds light on an innovative view of project outcomes, with a specific focus on sustainability, low-carbon approaches, social equity, and related factors. In this regard, Kumaraswamy et al. [9] identified potential strategies for expediting the delivery of low-carbon buildings in high-rise and high-density cities by addressing common constraints identified in recent studies. Furthermore, Bailey et al. [12] presented the findings of a critical scoping review of publications on the employment of individuals with disabilities in construction, revealing that research in this area remains nascent internationally and significant knowledge gaps exist compared to mainstream disability employment research.

Moreover, the Special Issue encompasses innovation in product management and urban-related topics, featuring research articles and review papers that contribute to our understanding of advancements in architectural products, visual aesthetics, accessibility assessment, and real estate evaluation, among others. For instance, Mridha et al. [14] investigated the connection between architectural product innovation and aesthetic preference, examining the significant role of innovation in perceiving the aesthetic preference of architectural products. Y. Li, Xie, et al. [21] developed an improved Gaussian-based two-step floating catchment area method to measure park accessibility for various travel modes in 5 min, 15 min, and 30 min scenarios. L. Wang et al. [25] developed a real estate early warning system based on an improved PSO-LSSVR model and test its effectiveness in the city of Beijing.

3. Conclusions

The papers featured in this Special Issue exemplify the various ways in which innovation can be utilized to overcome challenges, enhance efficiency, and promote sustainable development in the industry. Categorized into five broad topic groups—technology, management, outcome, product, and urban—these research papers provide comprehensive insights into the intersection of tradition and innovation in construction project management.

As the construction industry undergoes continuous evolution, embracing both tradition and innovation becomes imperative. Traditional project management principles and practices serve as a robust foundation, while innovation unlocks new possibilities and facilitates ongoing improvement. By integrating innovative technologies, materials, and methodologies into construction project management, stakeholders can boost productivity, minimize costs, mitigate environmental impacts, and deliver exceptional building outcomes for society.

Conflicts of Interest: The authors declare no conflict of interest.

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