Contents

1 **A Cluster Analysis of Real Estate Business Models in China** 1
K.J. Li, Y. Zhou, A. Shrestha and G.W. Liu

2 **A Comparison of Barrier-Free Access Designs For the Elderly Living in the Community and in Care and Attention Homes in Hong Kong** 11
Ibukun Famakin and Mei-yung Leung

3 **A Comparison of Green Building Policies in Asian Countries or Regions** 19
Xiaosen Huo and Ann T.W. Yu

4 **A Comparison of Public Private Partnership Environment Between Australia and China** 35
Yongjian Ke, Marcus Jefferies and Peter Davis

5 **A Conceptual Model of Cloud-Based Virtual Community for BIM Innovation and Promotion** 45
C.W. Keung

6 **A Dynamic Analysis on the Urban Carbon Footprint and Carbon Carrying Capacity—A Case Study of Chongqing** 53
S.P. Li, Q.J. Zheng, D.H. Zeng, Z.H. Huang and L.Y. Shen

7 **A Framework for Quantifying Carbon Emissions Generated During Demolition Waste Processing** 67
Y. Li, H.Y. Wu, Z.Z. Wu, J.Y. Wang, H.B. Duan, J. Zuo, Z.D. Li and X.L. Zhang

8 **A Framework for Utilizing Automated and Robotic Construction for Sustainable Building** 79
Mi Pan, Thomas Linner, Hui Min Cheng, Wei Pan and Thomas Bock

9 **A Literature Review of Sustainable Urbanization in China** 89
Y.T. Tan and H. Xu

10 **A Macro-Micro Framework of ADR Use in the Malaysian Construction Industry** 97
Chia Kuang Lee, Tak Wing Yiu and Sai On Cheung

11 **A Preliminary Study on the Effects of HSR on Station Area** 107
Guo Liu and Kunhui Ye

12 **A System Dynamics Framework of Drivers and Constraints to Enhancing Productivity of the Hong Kong Construction Industry** 117
A.A. Javed, Zhan W and W. Pan

13 **A Whole Life Cycle Group Decision-Making Framework for Sustainability Evaluation of Major Infrastructure Projects** 129
B. Xue and H. Xu

14 **Adaptive Reuse of Inner-City Buildings: Methods for Minimising Waste and Stimulating the Economy** 141
N. Udawatta, Zillante George, A. Elmualim, R. Rameezdeen and J. Zuo

15 **An AHP-ANP Integrated Framework of Evaluating Innovative Business Models for Sustainable Building** 153
X. Zhao, L. Chen, W. Pan and Q. Lu

16 **An AHP-GIS Based Model of C&D Waste Landfill Site Selection: A Triangulation of Critical Factors** 163
Zhikun Ding, Menglian Zhu, Yifei Wang and Jiasong Zhu

17 **An Alternative Model for Regional Sustainability Evaluation: A Case Study of Chongqing** 175
C.Y. Shuai, Y.T. Tan and L.D. Jiao

18 **An Empirical Analysis of the Effect of Prefabrication on Fostering Sustainable Construction** 185
Peter S.P. Wong, Michael Phillip Kanellopoulos and Luke Edmonson

19 **An Empirical Investigation of Construction and Demolition Waste Management in China's Pearl River Delta** 197
J.K. Liu, Y.S. Pang, D. Wang and J.W. Zhou

20 **An Intelligent Decision Support System for Improving Information Integrity in Procuring Infrastructures in Hong Kong** 213
L. Chen and W. Pan

21 An Investigation of Waste Reduction Measures Employed in Construction Industry: Case of Shenzhen 223
Y. Gao, J.Y. Wang, H.Y. Wu and X.X. Xu

22 An Optimization-Based Semantic Building Model Generation Method with a Pilot Case of a Demolished Construction 231
F. Xue, K. Chen, D. Liu, Y. Niu and W.S. Lu

23 Analysis and Optimization of Key Index of Public Investment Building Project's Performance Evaluation Based on Project Governance 243
Y.S. Wang, F.f. Liu, W.Z. He, Y. Zhang, H.Y. Li and J.F. Li

24 Analysis on the Influencing Factors of Building Energy Consumption—A Southwest China Case Study 259
Z.N. Zhao, H.M. Zhang, Y.F. Ding and L.Y. Shen

25 Analysis on the Influencing Factors of Multidimensional LMDI Energy Consumption—A Case Study of Chongqing 273
H.M. Zhang, Z.N. Zhao, L.Y. Shen, W.W. Wen and M. Chen

26 Application of Building Information Modeling (BIM) in Site Management—Material and Progress Control 289
A. Nadeem, A.K.D. Wong, G. Akhanova, S. Azhar and S.N. Wong

27 Application of SWOT Analysis in Turkish Construction Industry 299
Z. Işık, H. Aladağ, G. Demirdöğen and Ç. Aygün

28 Assessment of Energy Efficiency for Retrofit Versus Reconstruction Projects by Building Information Modeling 311
G. Demirdöğen and Z. Isık

29 Barriers to and Enablers for Lessons Learned Practices in International Infrastructure Development Projects—A Case Study 321
Tiendung Le, Eric Too and Viet Anh Tran

30 Benchmarking Innovation Potentials in Large Projects by Public Private Partnerships 331
Cut Sarah Febrina and Palaneeswaran Ekambaram

31 Benefits of Using Constructability, Operability, and Maintainability in Infrastructure Projects: A Meta-Synthesis 347
S. Jadidoleslami, E. Saghatforoush, N. Kordestani Ghaleenoe and C. Preece

32 Big Data in Urban Planning Practices: Shaping Our Cities with Data 365
Ruiqu Ma, Patrick T.I. Lam and C.K. Leung

33 Board of Director's Role in Preventing Corporate Misconduct in the Construction Industry 375
C.J. Lee, R. Wang, S.C. Hsu and C.Y. Lee

34 Bridging Knowledge Gap Between Green and Non-green Facilities Management in Singapore 383
Yujie Lu and Ngiam Min Li Joyce

35 Bridging the Cyber and Physical Systems for Better Construction: A Case Study of Construction Machinery Monitoring and Utilization 393
D.D. Liu, W.S. Lu, Y.H. Niu, F. Xue and K. Chen

36 Building Information Modeling (BIM) in Architecture, Engineering and Construction (AEC) Industry: A Case Study in Malaysia 401
N.F. Azmi, C.S. Chai and L.W. Chin

37 Carbon Emission Modelling for Construction Logistics Process Through Activity-Based Method 413
Y. Fang, Z.D. Ma and Y.Z. Luo

38 Causal Loop Analysis on the Impact of Schedule Risks in Prefabrication Housing Production in Hong Kong 425
W.K. Huang, X.X. Xu, K. Chen, H.Y. Wu and Z.D. Li

39 Causes of Delays in Mega Projects—Case of the Zambian Transmission Power Projects 435
Chaali Kalebuka, Erastus Mwanaumo and Wellington Didibhuku Thwala

40 Characterization of Carbon Emissions from the Construction Activities: A Case Study of Shenzhen, China 451
L.N. Zheng, H. Zhang., H.B. Duan, X.H. Wang, Y.N. Niu and J.Y. Wang

41 China's Ongoing Policy Instrument for Building Energy Efficiency: Drives, Approaches and Prospects 461
B. He, X.L. Zhang, L.D. Jiao and L.Y. Shen

42 Chinese Building Energy Service Industry Evolution Based on Ecological Niche 471
Saina Zheng, Pengpeng Xu, Guiwen Liu and Jinxi Jing

43 Clean Development Mechanism in Airports: The Colombian Case 481
J.D. González-Ruiz, E.A. Duque and J.C. Restrepo

44 Conflict Analysis of Concentrated Rural Settlement Development During Post-disaster Reconstruction in China: A Multi-agent Simulation 491
Y Peng, Q.X. Li and H.J. Bao

45 Construction and Demolition Waste Management: Experiences Learning from Developed Countries and Their Enlightenment to China 503
X.H. Wang, H. Zhang, L.N. Zheng, H.B. Duan, Y.N. Niu and J.Y. Wang

46 Construction Project Manager Health and Safety Interventions Towards Improving Workers' Performance 513
W. Ayessaki and J. Smallwood

47 Construction Work Productivity in South Africa: A Case of Gauteng Province Construction Industry 523
A.S. Sibande and N.J. Agumba

48 Contractors' Organisational Culture Towards Health and Safety Compliance in Ghana 535
Z. Mustapha, C. Aigbavboa and W.D. Thwala

49 Convention and Exhibition Center Integrated into High Speed Rail Station: Experience and Idea 543
Yue Li and Yuzhe Wu

50 Corporate Social Responsibility Localization in International Construction Business 553
Meng Ye, Weisheng Lu and Roger Flanagan

51 Correlation Analysis of Key Influencing Factors to the Total Factor Productivity of the Hong Kong Construction Industry . . . 565
W. Zhan, W. Pan, A.A. Javed and K.W. Chau

52 Critical Impact Factors Affecting Carbon Emission: Evidence from STIRPAT Model with Panel Data Analysis 577
C.Y. Shuai, X.N. Song and S.P. Li

53 Critical Risks Associated with BIM Adoption: A Case of Singapore 585
Xianbo Zhao, Josua Pienaar and Shang Gao

54 Critical Success Factors of Joint Ventures in the Construction Industry: Literature Review 597
M.F. Bekale Mba and N.J. Agumba

55 Detection and Quantification of Spalling Distress in Subway Networks 607
T. Dawood, Z. Zhu and T. Zayed

56 Determinants of Business Overdraft Accessibility Within Small and Medium-Sized Enterprises in the South African Construction Industry: A Case of Gauteng Province 617
O.A. Balogun, N.J. Agumba and N. Ansary

57 Determination of Project Management Competence Risks in Build Operate Transfer (BOT) Transportation Projects 629
H. Aladağ and Z. Işık

58 Does the Development of China's Building Industry Influence the Global Energy Consumption and Carbon Emissions? an Analysis Based on the GVAR Model 641
Hong Zhang, Jiawei Chen, Yang Li and Michael J. Seiler

59 Driving Factors for Promoting Urbanization of Small Townsin Southwest China 651
Ning Xiong, Zhenhua Huang, Shanshan Zhao and Liyin Shen

60 Estimating the Walking Accessibility Premiums 665
Linchuan Yang

61 Evaluating the Critical Risk Factors of Reconstruction Urban Renewal Projects: The Developer's Perspective in China 677
W.D. Wu, G.W. Liu, Z.H. Cai and S.N. Zheng

62 Evaluating the Effects of Alleviating Urban Traffic Congestion Using Real-Time Traffic Information on Mobile Devices 689
M.W. Hu, W.K. Huang and Y. Chen

63 Evaluation of Construction Waste: Management Problems and Solutions 701
T. Quinn and J.J. Smallwood

64 Evaluation of Procurement Systems of Public Sector Funded Projects 709
A.E. Oke, C.O. Aigbavboa and B.A. Tong

65 Evolutionary Game Analysis on the Low-Carbon City Construction Between Central and Local Government in China 717
Yingli Lou, Xiangnan Song and Hui Yan

66 Examining Critical Factors Affecting Knowledge Transfer in Public-Private Partnership (PPP) Projects 727
T.T. Liu and Y.C. Wang

67 Explication of Challenges with Acceptance of Marketing Functions in the Management of Construction Business Enterprise 745
J.E. Yankah, C. Aigbavboa and W. Thwala

68 Factors Influencing Safety Training Transfer on Construction Sites: A Literature Review 759
R. Prasad, Y. Feng and M. Hardy

69 Factors Influencing the Construction Time and Cost Overrun in Projects: Empirical Evidence from Pakistani Construction Industry 769
Ahsen Maqsoom, Muhammad Umar Khan, Muhammad Tariq Khan, Shahfahad Khan, Naeemullah and Fahim Ullah

70 Feasibility Analysis of Using Construction and Demolition Waste in Sea Reclamation Projects in Hainan 779
X.L. Li, Y. Li, H.Y. Wu, J.Y. Wang, H.B. Duan and X.X. Xv

71 Female Student Enrolments in Construction Management Programs 789
B.L. Oo and E.C. Widjaja

72 Financial Simulation in Operation and Maintenance of Railway Transportation: A Case Study of Greater Jakarta Light Rail Transit 799
H.Z. Rahman, P. Miraj and J.S. Petroceany

73 Finding Academic Concerns on Real Estate of U.S. and China: A Topic Modeling Based Exploration 807
Z.R. Zhang, M.S. Qiang and H.C. Jiang

74 From Paper-Based to Cloud-Based Safety Information System in Infrastructure Construction Projects 819
Patrick X.W. Zou, Percy K.Y. Lun, Palaneeswaran Ekambaram, Sheirf Mohamed and Dean Cipolla

75 Game Analysis of Stakeholders in Urban Renewal Based on Maximization of Social Welfare 835
J.F. Li, Y.S. Wang, N. Lu, Y. Du, Y. Zhang and F.F. Liu

76 Game-Based Construction Process Learning for Students' Education: A Case Study of Concreting Game 851
Fei Feng, Zhiyang Lin, Wenfeng Yue, Ke Chen, Ming Kang and Yonghong Cao

77 Identification and Assessment of Particulate Matters in Asphalt Fumes from Road Construction 859
D. Chong, M. Kobzeva and Y.H. Wang

78 Identifying the Relationship Between Housing Market Development and Urbanization Process: Evidence from Jiangsu, China 869
Jing Du, Yifan Yang and Bing Jiang

79 Impacts of Large Construction Projects on Residents' Living Status in China: A Reservoir Project Case 879
W.S. Lin, Y. Ning, Y.L. Huang and M.J. Liu

80 Improving Construction Safety Performance Through Error Management: A Literature Review 891
Minh Tri Trinh and Yingbin Feng

81 Improving Mentoring Relationships of Construction Management Professionals 899
A.E. Oke, C.O. Aigbavboa and M.M. Mutshaeni

82 Index Decomposition Analysis of Building Energy Consumption in Chongqing: 2000–2014 907
Xia Wang, Hong Ren, Weiguang Cai and Yan Liu

83 Indicators for Guiding Sustainable Development of Townships in Mountainous Regions in Southwest China 917
Y. Chen, Y.T. Ren, Y.L. Huang and L.Y. Shen

84 Influential Factors in Construction Industry of Yemen 927
Najib AL-Fadhali, Ng Kim Soon, Rozlin Zainal, Abd Rahman Ahmad and Abdel Hafiz Ali Hasaballah

85 Investigating the Relationship Between Student Characteristics and Progression: An Archive Study 945
Josua Pienaar, Xianbo Zhao and Nadine Adams

86 Key Parameters on Financial Loss of Construction Accidents in Hong Kong Construction Industry 957
Kai-Chi Ying, Guomin Zhang and Sujeeva Setunge

87 Knowledge Transfer Between R&D Projects and Commercial Projects: A Conceptual Framework 969
Eric Too and Stewart Bird

88 Life Cycle Costing for Insulated Pitched Roof Structures 981
I.M. Chethana S. Illankoon, Vivian W.Y. Tam and Khoa N. Le

89 Life-Cycle Cost Assessment of Durable Repair of Concrete Structures Based on Environmental Costs 995
X.M. Mi, C.Y. Liu, D.W. Li, N.X. Han and F. Xing

90 Literature Review on the Research Discipline of Low Carbon Cities in China 1005
X.Y. Du, T.K. Li, Z.H. G and L.Y. Shen

91 Management Strategies for 5D-BIM Adoption in Hong Kong 1023
I.Y.S. Chan, A.M.M. Liu and B. Chen

92 Method for Urban Rail Transit Project Financing Decision-Making Based on Triangular Fuzzy Number 1041
L.L. Yuan, Y.S. Wang and Y. Sun

93 On Territorial Planning Reconfiguration in China: A Critical Review of the Existing Planning System 1055
Liping Shan, Yuzhe Wu and Sheng Zheng

94 On the Garbage Classification Mechanism Based on Repeated Games in Urban Network Organization 1065
Teng Su and Yuzhe Wu

95 Optimizing Life-Cycle Carbon Emissions for Achieving Concrete Credits in Australia 1077
Vivian W.Y. Tam, Khoa N. Le and Cuong N.N. Tran

96 Paradigm Shift Towards Green Industry Restructuring: A Review of Industrial Land in China 1089
Jiaojiao Luo, Yuzhe Wu and Xiaoling Zhang

97 Pilot Case Study of New Engineering Contracts (NECs) in Hong Kong—Joy or Tears? 1103
D.W.M. Chan and J.H.L. Chan

98 Potentials of TDR for Balancing Built Heritage Conservation and Compact Development in Hong Kong 1113
Jun Hou and Edwin H.W. Chan

99 Prioritizing Best Value Contributing Factors for Contractor Selection: An AHP Approach 1121
Muhammad Hasnain, Fahim Ullah, Muhammad Jamaluddin Thaheem and Samad M.E. Sepasgozar

100 Recycled Aggregate in Concrete Production: A New Approach 1133
Vivian W.Y. Tam, Anthony Butera and Khoa N. Le

101 Recycled Ceramic Fine Aggregate for Masonry Mortar Production 1141
A.C.J. Evangelista, Vivian W.Y. Tam and J. Santos

102 Remaking the Physical Disability Inclusion Score (PDIS) and the Visual Impairment Inclusion Score (VIIS) to Assess the Disability Inclusiveness of Commercial Facilities: A Pilot Study 1149
W.K. Lau, T.Y.M. Lam, W.M. Ho and W.K. Wu

103 Research of Housing Price Based on Bid-Rent Theory 1167
Donglang Yang, Zhongfei Cui and Luyao Zhao

104 Research on Cost Risks for EPC Project Using Entropy-Weight Evaluation Method 1175
Jiali Liu, Jinjin Chen and Liyin Shen

105 Research on Dynamic Fuzzy Multi-objective Optimization of Engineering Projects Considering Risk Factors 1185
R.X. Ding, X.Q. Wang, T.T. Han, M.X. Li and N.N. Xia

106 Research on Evaluation of Xi'an Shantytown Renovation Projects' Social Benefit 1203
Yang Donglang, Zhao Luyao and Cui Zhongfei

107 Research on Performance of Construction Enterprises Based on Informatization and Contract Management 1215
Bing Zhang and Sujie Hu

108 Research on the Comprehensive Economic Strength of Macro Regional Distribution in Urbanization 1225
Min Tian, Na Tang and Jie Han

109 Research on the Housing Affordability of University Graduates in Guangzhou 1239
Fan Wu, Linghin Li, Mingjie Dai, Yiming Gao, Ruoshi Tang, Kaihang Lin, Kaijian Li and Haoqi Huang

110 RFID-Enabled Management System Adoption and Use in Construction: Passing Through the Labyrinth with an Improved Technology Acceptance Model 1251
Y.H. Niu, W.S. Lu and D.D. Liu

111 Risk and Risk Factors in Brownfield Development 1259
Hao Wu, Piyush Tiwari, Sun Sheng Han and Toong-Khuan Chan

112 Risk Management in the Supply Chain of Essential Medicines . . . 1275
Mario M.J. Musonda, Erastus M. Mwanaumo and Didibhuku W. Thwala

113 Rural Residential Land Transfer in China: Government-Driven or Market-Driven? 1289
Zhibin Mo, Yuzhe Wu and Jianfeng Ye

114 Scenarios for Applying Big Data in Boosting Construction: A Review 1299
X. Chen and W.S. Lu

115 Smart Gateway for Bridging BIM and Building 1307
K. Chen, W.S. Lu, F. Xue, L.Z. Zheng and D.D. Liu

116 Spatial-Temporal Effects of Housing Price Caused by Metro Construction: A Perspective of Price-to-Rent Ratio 1317
Fen Wang and Yuzhe Wu

117 Stakeholder Analysis of Sustainable Construction in China 1335
Hongyang Li, S. Thomas Ng and Yahong Dong

118 Strategic Factors Influencing Bid/No-Bid Decision of Pakistani Contractors 1345
Ahsen Maqsoom, Malik Muhammad Farjad, Muhammad Sadaat Abbas, Muhammad Ehtesham-Ul-Haque, Muhammad Irfan and Aman Ullah Malik

119 Study on the Affordable Housing Policy in China's Urbanization Process 1355
Wei Wang, Zhengrong Liu and Yuzhe Wu

120 Suggestion for Improving Project Management Competency of Project General Contractors in China 1365
Weiping Jiang

121 The Analysis of Rural Undergraduates' Separation of Registered and Actual Residences and the Separation's Influences on Land Use 1375
Qiong Lin and Yanmei Ye

122 The Decoupling Analysis Between Regional Building Energy Consumption and Economic Growth in China 1385
Ya Wu and Hang Yan

123 The Demand for Senior Housing Grows. The Answer Is to Be Found in Various Models of Social "Enterprise" 1397
A.S. Pavesi, A. Ciaramella, M.Y. Leung and M. Gechelin

124 The Effect of Contract Control on Contractors' Cooperative Behavior: The Moderating Role of Owner Power 1407
X.K. Jiang and S.J. Zhang

125 The Evaluation of Urban Renewal Policies in Shenzhen, China (2009–2016): An Analysis Based on Policy Instruments 1419
Z.Y. Yi, A. Shrestha, L.Z. Wei and G.W. Liu

126 The Improvement of Safety Climate of Migrant Workers Based on Social Mining Technologies 1429
Sheng Xu

127 The Potential Cost Implications and Benefits from Building Information Modeling (BIM) in Malaysian Construction Industry 1439
LiWei Chin, ChangSaar Chai, HeapYih Chong, Aminah Md Yusof and NurFakhira bt Azmi

128 The Researches on Construction Project Manager Competency and Its Application 1455
Jingru Li, Junpeng Li and Ruirui Xia

129 The Rise of the Smart Circular City: Intelligent Modelling of Cities for Improved Waste Reuse and Environmental Effects 1463
R. Vrijhoef

130 The Simulation and Evaluation Method and Technology of Passenger Flow in Urban Rail Terminal 1473
W.K. Huang, M.W. Hu and S.Y. Zhai

131 The Supply and Demand for Green Housing in China: A Micro-Perspective 1487
L. Zhang, H. Liu, X. Wang and X. Tang

132 Trend Analysis of the Labor Supply and Demand in China's Construction Industry: 2016–2025 1499
H. Ye and Y. Zhang

133 Understanding Construction Technology Transfer from a 'SCOT' Perspective 1509
K. Oti-Sarpong and R. Leiringer

134 Urban Green Land Carbon-Sink in Different Functional Cities: The China Case 1521
Z.H. Huang, N. Xiong, X.L. Zhang, S.P. Li and L.Y. Shen

135 Use of a Mobile BIM Application Integrated with Asset Tracking Technology Over a Cloud 1535
J. Park and Y.K. Cho

136 Using Switching State-Space Model to Identify Work States Based on Movement Data 1547
Xincong Yang, Heng Li, Fenglai Wang, Xiaochun Luo and Dongping Cao



http://www.springer.com/978-981-10-6189-9

Proceedings of the 21st International Symposium on Advancement of Construction Management and Real Estate

Chau, K.W.; Chan, I.Y.S.; Lu, W.; Webster, C. (Eds.)
2018, XX, 1558 p. 303 illus., 188 illus. in color. In 2 volumes, not available separately., Softcover
ISBN: 978-981-10-6189-9