

MOHD AZRAI AZMAN (Dr, PQS)**Senior Lecturer**

School of Construction and Quantity Surveying
College of Built Environment (CBE)
Universiti Teknologi MARA,
40450 Shah Alam,
Selangor, Malaysia.



+60162243530
mohdazrai@uitm.edu.my

Areas of Expertise

Construction productivity and efficiency; Construction economics; Financial management

<https://scholar.google.com/citations?user=IkBp4mIAAAJ&hl=en>
<https://www.researchgate.net/profile/Mohd-Azrai-Azman/research>
<https://orcid.org/0000-0003-4025-4788>
<https://www.webofscience.com/wos/author/record/1966699>

Personal Information

Mohd Azrai Azman (Dr, PQS), Quantity Surveying
Universiti Teknologi MARA, Shah Alam, Selangor (2022-Current)
Universiti Teknologi MARA, Sarawak Branch, Kota Samarahan, Sarawak (2012-2022)

Academic Qualifications

PhD in Built Environment, 2020, Queensland University of Technology (QUT), Brisbane, Australia
MSc (Building) by Research, 2012, Universiti Malaya, Kuala Lumpur, Malaysia
Bachelor of Quantity Surveying (Hons), 2008, Universiti Teknologi MARA, Shah Alam, Selangor
Diploma in Quantity Surveying, 2006, Universiti Teknologi MARA, Shah Alam, Selangor

Professional Members

Professional Quantity Surveyor, Board of Quantity Surveyors Malaysia, 2023/PQS03448
Associate Fellow of Advance HE, United Kingdom, PR172038

Teaching and Learning

Construction Economics

Measurement of Civil Engineering

Capital Budgeting and Financial Management

Risk Management

Student Supervision

Master of Science (Built Environment) by Research

1. Farah Nazira Juhari. Indicators of labour productivity in the Malaysian construction industry: The effect of capital intensity and regulation (2021-Ongoing), Main Supervisor

Master of Science (Facilities Management)

1. Siti Umairah Mohd Razali. A study on satisfaction towards outsourcing facilities management services at shopping malls within Klang Valley Area (2023-Ongoing). Main Supervisor
2. Muhammad Khalid Hassan. Asset Management practices for Small and Medium Enterprises in Cyberjaya (2023-Ongoing). Main Supervisor

Bachelor Degree

2021

1. Ahmad Nabil Ramli. Factor affecting labour productivity in building construction project in Malaysia.
2. Siti Aisyah Mohmad Ileyes. Labour productivity based on construction industry performance: sectorial analysis.

2022

1. Mohd Iskandar Dzulkarnain Mohd Lan. A study on digitalisation of quantity surveying tasks in East Malaysia during Covid-19 pandemic.
2. Nur Syaheerah Saiful Bahri. Performance management and indicators of quantity surveying firms in Sarawak.
3. O'Bryan Dunggat Ricky Insol. The implementation of time management amongst quantity surveying students in Universiti Teknologi MARA, Sarawak.

2023

1. Afiq Imran Yusni. Employers' perceptions towards open distance learning of quantity surveying fresh graduates.
2. Arif Farhan Rahamat. A study on the factors and effects of noise pollution along Light Rapid Transit (LRT) Shah Alam line construction site.
3. Amir Azri Azami. Problems and issues of staff turnover in quantity surveying consultant firms.
4. Hafizuddin Haziq Yahya. A study on the fire safety implementation in buildings from consultants' perspective.
5. Hidayati Amminy Ahmad Amminy. Smart mosque: a comparative study of economics dimensions between traditional mosque and smart mosque.
6. Muhammad Afif Syamim Afandi. Corruption in the Malaysian construction industry contribution factors influencing professionals' involvement.
7. Muhammad Arif Izzat Mohd Nor. The challenges in managing construction safety when the project is running.
8. Nur Khalisa Ahmad Zawawi. Contractors' measures in mitigating flash floods for construction sites in urban areas.
9. Nur Najihah Mohd Baba. An insight on the implementation of green campus: a case study of Universiti Teknologi MARA (UiTM) Shah Alam and Puncak Alam.
10. Nurul Amirah Afandi. Productivity of Muslim Labourers on construction site during Ramadan.

11. Nurul Izzah Aqilah Hassan. Electrical fire safety evaluation in high-rise residential buildings.
12. Sha Ahda Nashuha Sabarudin. Reasons for building defects in public schools.
13. Siti Nor Baizura Razali. Key factors influencing health and safety management in confined spaces.
14. Siti Norzarifah Mustaffa. Factors affecting customer satisfaction in using Damansara-Shah Alam Elevated Expressway (DASH) operation.

Publications

First author / corresponding publications in WOS/Scopus

1. **Azman, M. A.**, Samad, Z. A., Lee, B. L., Skitmore, M. Rajendra, D. & Chuweni, N.N. (2022). How technological, environmental and managerial performance contribute to the productivity change of Malaysian Construction Firms. *Engineering, Construction and Architectural Management*. 31(2): 618-637
2. **Azman, M. A.**, Hon, C. K. (2023). A Methodological Application to Construction Economics Research for Theory Refinement and Extension, *Mixed Methods Research Design for the Built Environment*, Routledge: Taylor & Francis Group. Editors: Charles Egbu, Julius Akotia and Bankole Awuzie.
3. **Azman, M. A.**, Chuweni, N.N., Halil, F. M., Azir, K.M.A.K., Lee, B.L., Juhari, F.N. & Skitmore, M. (2023). The impact of the change in institutional regulation on construction productivity: Firm-level evidence in a developing economy. *Construction Management and Economics*. <https://doi.org/10.1080/01446193.2023.2227286>
4. Juhari, F.N., **Azman, M. A.**, Chuweni, N.N., Halil, F. M., Azir, K.M.A.K., Lee, B.L. (2023). Indicators of labour productivity in the construction firms: the conceptual modelling of capital intensity and market regulation. *Malaysian Construction Research Journal*. 20(3): 161-173.
5. **Azman, M. A.**, Hon, C. K., Xia, B., Lee, B. L., & Skitmore, M. (2022). Internationalisation and Productivity of Construction Firms in a Developing Country: The Effect of Institutional Environment and Ownership on Malaysian Construction Firms. *Journal of Management in Engineering*, 38(1), 04021081.
6. **Azman, M.A.**, Hon, C. K., Xia, B., Lee, B. L., & Skitmore, M. (2020). Product diversification and large construction firm productivity: the effect of institutional environments in Malaysia. *Engineering, Construction and Architectural Management*, 28(4), 994-1013.
7. **Azman, M.A.**, Hon, C. K., Skitmore, M., Lee, B. L., & Xia, B. (2019). A Meta-frontier method of decomposing long-term construction productivity components and technological gaps at the firm level: evidence from Malaysia. *Construction Management and Economics*, 37(2), 72-88.
8. **Azman, M.A.** (2016), Bidding competitiveness: a comparative analysis of different bid auctions in Malaysia, *Journal of Engineering, Design and Technology*, 14(4), 678-698.
9. **Azman, M.A.** (2014). Number of bidders in small and medium public construction procurement in Malaysia. *Applied Mechanics and Materials*, 567, 595-600.
10. **Azman, M.A.**, Abdul-Samad, Z., & Ismail, S. (2013). The accuracy of preliminary cost estimates in Public Works Department (PWD) of Peninsular Malaysia. *International Journal of Project Management*, 31(7), 994-1005.

Peer-reviewed publications in WOS/Scopus

1. Amirul, S.R., Bohari, A.A.M., Julaihi, F.A., **Azman, M.A.** & Kipli, K. (2022) Advancing the Notion of Maslow Hierarchical Needs Theory Into Retirement Village Sustainability Needs, *Malaysian Construction Research Journal*. 17(3) 2022: 70-80

2. Julaihi F. J., Bohari A.A.M., **Azman, M.A.**, Kipli K. & Amirul, S. R. (2022) The Preliminary Findings on the Push Factors for the Elderly to Move to Retirement Villages in Malaysia, *Pertanika Journal of Social Sciences and Humanities*. 30(2) 2022: 761-778.
3. Mahat, N, Bohari A.A.M., **Azman, M.A.**, Khalil, N, Adnan, A.S. & Abd Malek, M.I. (2022), E-Procurement Adoption in the Malaysian Construction Sector: Integrating Diffusion of Innovations and Theory of Planned Behaviour Framework. *Jurnal Kejuruteraan* 34(3) 2022: 347-352.

Peer-reviewed publications

1. **Azman, M. A.**, Chuweni, N.N., Halil, F. M., Azir, K.M.A.K., Lee, B.L. & Juhari, F.N. (2023). The Effect of Market Competition and Institutional Regulation on Productivity: A Conceptual Modelling, *International Journal of Academic Research in Accounting Finance and Management Sciences*. 12(3) 2022: 890-902
2. Mahat, N., **Azman, M. A.**, Bohari, A. A. M., Rashid, A. F. A., Khamaksorn, A., & Malek, M. I. A. (2022). BC-DIGIT: A Digital Game Application for Learning Building Construction Technology Course among Undergraduate Students. *International Journal of Academic Research in Progressive Education and Development*, 11(2), 467–473.
3. Halil, F. M., Romeli, N., **Azman, M. A.**, & Hasim, M. S. (2021). Perception of public and private clients on the benefits of partnering with contractor in industrialised building system. *Journal of Administrative Science*, 18(2), 111-128.

Peer-reviewed conference publications

1. Bohari A.A.M., Julaihi, F. J., **Azman, M.A.**, Amirul, S. R., & Kipli K. (2023). Understanding the potential of retirement villages in Malaysia. AIP Conf. Proc. 2 November 2023; 2983 (1): 030005.
2. Juhari, F.N, Halil, F. M., **Azman, M. A.**, Chuweni, N.N., Azir, K.M.A.K. & Lee, B.L. (2023). Indicators of labour productivity in the Malaysian construction firms: Conceptual modelling of capital intensity and market regulation. 6th International Conference on Research Methodology for Built Environment and Engineering 2023 (ICRMBEE2023).
3. Amirul, S. R., Bohari A.A.M. Julaihi, F. J., **Azman, M.A.** & Kipli K. (2022)
4. Advancing The Notion of Maslow Hierarchical Needs Theory into Retirement Village Sustainability Needs, 2nd International Conference on The Built Environment and Engineering 2021 (IConBEE2021).
5. **Azman, M.A.**, Chuweni, N.N., Halil, F.M., Azir, K.M.A.K., Lee, B.L., Juhari, F.N. (2022), The Effect of Market Competition and Institutional Regulation on Construction Productivity: A Conceptual Modelling. *4th International Conference on Accounting and Management (ICAM2022)*, Faculty of Accountancy, Universiti Teknologi MARA Selangor, MALAYSIA, (Paper ID 014), 16-18.
6. Bohari A.A.M. Benyamin, S. A. M., Julaihi F. J., **Azman, M.A.**, Kipli K. & Amirul, S. R. (2022), Sustainable Retirement Village Establishment: The Possible Challenges, Lect. Notes in Networks, Syst., Vol. 486. *Business and Technologies: Opportunities and Challenges*, Springer Nature, (Chapter 122).
7. Mahat, N, Rashid, A. F. A., **Azman, M.A.**, Bohari, A. A. M., Budin, H., Ikau, R. & Kamaruzaman N. U. S. N. (2021). OSH-DBG As a Method of Digital Problem Solving for Learning Construction Safety and Health. *International Innovation, Design and Articulation i-IDEA*, 158-165.
8. Othman, M. K. F., Muhammad, W. M. N. W., Abd Hadi, N., & **Azman, M.A.** (2017). The Significance of Coordination for Industrialised Building System (IBS) Precast Concrete in Construction Industry. *MATEC Web of Conferences*, 103, 03004.

9. Muhammad, W. M. N. W., **Azman, M.A.**, Othman, M. K. F., Hadi, N. A., Sahimi, S. N. S., & Mohammad, M. F. (2016). The insight of industrialised building system (IBS) by Bumiputera construction players. *MATEC Web of Conferences*, 47, 04013

Research Grants and Contracts

1. 2021 to 2023 – Principal Investigator, MyRA Research Grant, Universiti Teknologi MARA, The Effect of Market Competition and Regulation on Construction Productivity in Malaysia: Econometric Modelling on Large Firms and The Industry (Amount: MYR 20,000).
2. 2020 to 2023 – Co-researcher, Malaysia Comprehensive University Network Grant, Universiti Teknologi MARA, Pathway Towards the Establishment of Sustainable Retirement Villages for Greying People in Sarawak, Sustainable Development Goals Research in Borneo (Amount: MYR 11,000).
3. 2014 to 2017 - Co-researcher, Research Acculturation Grant Scheme (RAGS), Minister of Education, Coordination determinants of the IBS precast concrete system operation in Sarawak (Amount: MYR 60,000).
4. 2013 to 2014 – Principal Investigator, Research Excellence Fund, Universiti Teknologi MARA, Bidding Competitiveness: Empirical Analysis from Public Construction Contracts in Malaysia (Amount: MYR 5,000).

Consultation & Expertise

Reviewer

1. Energy, Elsevier (2021-present)
2. Journal of Building Engineering, Elsevier (2023-present)
3. Building Research and Information, Taylor & Francis (2021 – present)
4. Construction Management and Economics, Taylor & Francis (2019 – present)
5. Engineering Construction Architectural Management, Emerald (2020 – present)
6. International Journal of Construction Management, Taylor & Francis (2019 – present)
7. International Journal of Project Management, Elsevier (2012 – present)
8. Journal of Engineering, Design and Technology, Emerald (2016 – present)
9. Journal of Public Affairs (2023-present)

Innovation, Commercialization & Entrepreneurial

1. Amirul, S. R., Bohari A.A.M., **Azman, M.A.**, Kipli K. & Julaihi F. J. Innovation Policy Instrument for Sustainable Retirement Village in Malaysia, Virtual Melaka International Intellectual Exposition (V-MIIEIX 2021), Universiti Teknologi MARA, Melaka Branch (Bronze Medal).
2. Mahat, N, Rashid, A. F. A., **Azman, M.A.**, Bohari, A. A. M., Budin, H., Ikau, R. & Kamaruzaman N. U. S. N. Occupational Safety And Health – Digital Board Game (OSH-DBG), A Way Forward For Digital Teaching and Learning. i-JaMCSIIX 2021, International Jasin Multimedia & Computer Science Invention and Innovation Exhibition, Universiti Teknologi MARA, Malacca Branch (Silver Medal).
3. Mahat, N, Rashid, A. F. A., **Azman, M.A.**, Bohari, A. A. M., Budin, H., Ikau, R. & Kamaruzaman N. U. S. N. Occupational safety and health - digital board game (OSH-DBG) as a method of digital problem-solving for learning. i-IDeA™ 2020, The 5th International Innovation, Design and Articulation, Universiti Teknologi MARA, Perlis Branch (Silver Medal).

4. Muhammad, W. M. N. W., **Azman, M.A.**, Othman, M. K. F & Rashid, A. F. A. PWD203A Ruler, Sarawak Invention, Innovation & Design Expo (SIIDEx 2016), Dewan Jubli, Universiti Teknologi MARA, Sarawak Branch

Services & Administration

1. Managing Editor, Built Environment Journal, 2023 – present
2. Coordinator, Timetables, 2014 – 2016, 2022 - present
3. Coordinator, Quality, 2022-present
4. Coordinator, Publication, 2022 – present
5. Secretary, Department's meetings, 2012 – 2013, 2022 - present
6. Coordinator, Malaysia Research Assessment (MyRA) for UiTM, Sarawak Branch, 2020 – 2022
7. Coordinator, Examination, 2020 - 2022
8. Advisor, Non-academic Activity, 2013 - 2014
9. Advisor, Quantity Surveying Society, 2013 - 2014
10. Coordinator, Resource Centre, 2012 – 2014

Work and Collaboration Experience

1. Elemental Cost Analysis (ECA) - Virtual Talk, School of Built Environment, University College of Technology Sarawak, 15 November 2021
2. Webinar Session Speaker, "Diversification and Large Construction Firm Productivity: The Effect of Institutions in Malaysia". Inviting Institution: Universiti Teknologi MARA, 16 October 2020
3. Introduction to Quantitative Data Analysis (Hands-on SPSS), Department of Quantity Surveying, Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Sarawak Branch, 22 April 2022
4. How Construction Productivity Improving Economic Growth and Development, Malaysia Productivity Corporation, Studio, MPC Petaling Jaya, Selangor, 17 April 2023

Awards & Recognitions

1. Best paper – International Conference on Accounting & Management (ICAM 2022) on September 21-22, 2022, Faculty of Accountancy, Universiti Teknologi MARA
2. Outstanding Service Award 2021, Universiti Teknologi MARA
3. High-impact journal publication, College of Built Environment Excellence Awards (CBEEA) 2022

Contribution to Society

1. Ekspo Selangkah ke UiTM 2016, 11-13 Mac 2016, UiTM Cawangan Sarawak
2. Misi Akademik ke Kem PLKN Juara, Serian, 24 Januari 2015, UiTM Cawangan Sarawak
3. Ekspo Selangkah ke UiTM 2014, 16-17 Ogos 2014, UiTM Cawangan Sarawak
4. Misi Akademik ke Sarikei dan Bintangor, 29-30 Mac 2014, UiTM Cawangan Sarawak
5. Ekspo Selangkah ke UiTM 2014, 20-23 Mac 2014, UiTM Cawangan Sarawak
6. Ekspo Kemasukan ke UiTM 2013, 23-30 Julai 2013, UiTM Cawangan Sarawak

Other Activities

Undergraduate competition

1. Gold Award (Highest), 7th International Built Environment Undergraduate Research Competition (BEURC) 2022, Student: Mohd Iskandar Dzulkarnain Mohd Lan, Faculty of Built Environment, Universiti Malaya
2. Gold Award (Highest), 7th International Built Environment Undergraduate Research Competition (BEURC) 2022, Student: Nur Syaheerah Saiful Bahari, Faculty of Built Environment, Universiti Malaya

MOOC Content Development

Co-developer of Massive Open Online Course (MOOC) for Construction Safety and Health (BGN292), led by N. Mahat, 1 Mac 2021 to 31 October 2021, Universiti Teknologi MARA (Completed)