

UNIVERSITI TEKNOLOGI MARA

**INDUSTRIALISED BUILDING
SYSTEM'S BUSINESS MODEL IN
IMPROVING THE PERFORMANCE
OF SME CONTRACTORS IN
MALAYSIA**

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PhD

July 2021

AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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Improving the Performance of SME Contractors in
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ABSTRACT

The Malaysian construction industry is dominated by SME contractors. Due to the high numbers, the competition to get projects is quite intense and some of the SME contractors face all sorts of problems affecting their performance. SME contractors need to move towards IBS if the target is to survive and sustain their construction business. Moving to IBS is not an easy task as there are many problems associated with it. The problems identified include the absence of an appropriate IBS business model for SME contractors, low performance of SME contractors in IBS business, limited study conducted to examine the moderating influence of government support on the relationship of IBS business and performance, and furthermore, most of the available IBS business models are not tailored to improve the performance of SME contractors. The study aims to develop an appropriate IBS business model in improving the performance of SME contractors in Malaysia with the establishment of four objectives which are (i) to investigate an appropriate IBS business model for SME contractors; (ii) to determine the relationship between IBS business models and the performance of SME contractors; (iii) to analyse the moderating influence of government support on the relationship of IBS business models and the performance of SME contractors, and (iv) to validate an IBS business model in improving the performance of SME contractors in Malaysia. A quantitative research approach was adopted for this study. The questionnaire surveys were randomly distributed to 358 G2 – G5 contractors who were involved in IBS, using a 34 item instrument. However, in the second phase of the data collection process, only 167 sets were completed. Data collected were analysed through three phases of statistical data analyses process. The phases were: data analysis preliminaries, descriptive statistical analyses and multivariate analyses. The data were analysed using the IBM SPSS version 23 and SmartPLS version 3.2.7 software. Based on the developed model, the study reveals that Operational Platform which consists of six elements: continuous improvement, partnering, sales management, supply chain management, core competencies, and key resources. Offering, on the other hand, consists of seven elements, i.e. manufacturing, installation, design, transportation, customisation, standardisation, and products. Meanwhile, Market Position which consists of the six elements of market segment, target customer, marketing strategy, supplier relationships, role in supply chain, and distribution channel, can improve the performance of SME contractors in terms of relationship, business, safety, profitability, quality, design, time, and cost. On the other hand, government support which consists of the promotion of IBS usage, training, financial assistance, tax incentives, and levy exemption was found to moderate the relationship between operational platform and the performance of SME contractors. Finally, it is expected that this research will be able to assist in escalating the participation of SME contractors in IBS in the construction industry. It can aid the owner or decision maker in the company in identifying areas that require development in order to improve the performance and it can be applied by other researchers in developing their research framework for future research. Future research should explore the IBS business model in terms of suitability to be used with other IBS systems, financial aspects, and collaborations with large contractors.

ACKNOWLEDGEMENT

In the Name of Allah SWT, The Most Beneficent, The Most Merciful.

Firstly, I wish to thank Allah SWT for giving me the opportunity to embark on my PhD study and for completing this long and challenging journey successfully.

My gratitude and thanks go to my supervisor Associate Professor Sr. Dr. Hj. Mohammad Fadhil bin Mohammad, and co-supervisor Associate Professor Dr. Rohana binti Mahbub, for their invaluable supervision, inspiring discussions, and support throughout my PhD journey. Working with them has been a pleasant and fruitful experience.

My sincere appreciation is also extended to all my friends especially to Ts. Mohd Najib bin Abd Rashid, Ezzat Fahmi bin Ahmad, Ts. Dr. Dzulkarnaen bin Ismail and Ts. Sr. Dr. Ridzuan bin Yacob who have provided assistance at various occasions, of which their views and tips are useful indeed. I would also acknowledge Taylor's University and Universiti Teknologi Mara (UiTM), for providing me opportunities for my academic development.

Finally, this thesis is dedicated to my beloved mother Mariam binti Puteh Abdullah, my late father Mohamed bin Pandak Utas, my wife Siti Mariam binti Abdul Halim, my son Mohamed Anuar Hisham, my daughters Siti Nur Madihah and Siti Nur Izzah, and all my family members; thank you for the prayers, sacrifices, patience and understanding while I embark along the winding road towards completing this thesis. This piece of achievement is dedicated to all of you.

Allahu Akbar and Alhamdulillah...

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