THE EFFECT OF BUILDING INFORMATION MODELLING IMPLEMENTATION ON SUSTAINABLE PROJECT PERFORMANCE IN THE CONSTRUCTION INDUSTRY: A MEDIATING IMPACT OF CIRCULAR ECONOMY PRACTICES

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I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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ABSTRAK

Penyelidikan ini membincangkan mengenai kesan pelaksanaan pembinaan pemodelan maklumat ke atas prestasi projek mampan dalam industri pembinaan: impak pengantaraan amalan kitaran ekonomi di Malaysia dengan menggunakan rangka kerja Pandangan Berasaskan Sumber Asli (NRBV). Objektif kajian ini adalah untuk menyiasat hubungan antara pelaksanaan pembinaan pemodelan maklumat dan amalan kitaran ekonomi, untuk menyiasat hubungan antara pelaksanaan pembinaan pemodelan maklumat dan prestasi projek mampan, untuk menyiasat hubungan antara amalan kitaran ekonomi dan prestasi projek mampan dan untuk menyiasat kesan amalan kitaran ekonomi terhadap hubungan pelaksanaan pembinaan pemodelan maklumat dan prestasi projek mampan. Kajian ini dijalankan menggunakan kaedah persampelan berstrata dan borang soal selidik dihantar melalui e-mel syarikat. Daripada kajian yang dijalankan, didapati bahawa pelaksanaan pembinaan pemodelan maklumat dalam syarikat pembinaan di Malaysia sedang membangun memandangkan syarikat pembinaan ingin mencapai prestasi projek mampan. Implikasi kajian ini secara teorinya akan memberi manfaat kepada penyelidikan lain untuk mencapai jurang dalam mengkaji amalan kitaran ekonomi di dalam industri pembinaan di Malaysia manakala industri pengamal dapat mengamalkan kitaran ekonomi secara efektif dalam mengurangkan penggunaan bahan binaan dalam industri pembinaan di Malaysia.

ABSTRACT

This research is present about the effect of building information modelling implementation on sustainable project performance in construction industry: a mediating impact of circular economy practices in Malaysia by using a Natural-Resource-Based View (NRBV) framework. The objectives of this study is to investigate the relationship between BIM implementation and circular economy practices, to investigate the relationship between BIM implementation and sustainable project performance, to investigate the relationship between circular economy practices and sustainable project performance and to investigate the mediating effect of circular economy practices on relationship between BIM implementation and sustainable project performance. This study was conducted using stratified method sampling and send the questionnaire via the company's emails. From these findings, the BIM implementation in Malaysian construction company are currently in developing progress as construction companies to have sustainable project performance. The implication of this study is the theoretical implication would be benefits to the other research to reach the gaps on adding more extensive studies on circular economy in Malaysian construction industry while the practitioner's industry can apply circular economy effectively in reducing the material consumption in construction industry in Malaysia.

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