

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 I have checked this thesis/project\* and in my opinion, this thesis/project\* is adequate in terms of scope and quality for the award of the degree of Master of Project Management with honors



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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.

## TABLE OF CONTENT

<b>DECLARATION</b>	
<b>TITLE PAGE</b>	
<b>ACKNOWLEDGEMENTS</b>	<b>ii</b>
<b>ABSTRAK</b>	<b>iii</b>
<b>ABSTRACT</b>	<b>iv</b>
<b>TABLE OF CONTENT</b>	<b>v</b>
<b>LIST OF TABLES</b>	<b>ix</b>
<b>LIST OF FIGURES</b>	<b>x</b>
<b>LIST OF ABBREVIATIONS</b>	<b>xi</b>
<b>LIST OF APPENDICES</b>	<b>xii</b>
<b>CHAPTER 1 INTRODUCTION</b>	<b>13</b>
1.1 Introduction	13
1.2 Research Background	13
1.3 Research Problem	15
1.4 Research Objectives	16
1.5 Research Questions	16
1.6 Scope of Study	17
1.7 Definition of Terms	17
1.7.1 Building information modelling (BIM)	17
1.7.2 Circular economy	18
1.7.3 Sustainable project performance	18
1.8 Significance of Study	18
1.8.1 Theoretical significant	18
1.8.2 Practical significant	18
1.9 Summary	18



<b>CHAPTER 2 LITERATURE REVIEW</b>	<b>20</b>
2.1 Introduction	20
2.2 Overview of the construction industry in Malaysia	20
2.3 A Natural-Resource-Based View (NRBV) of the firm framework	23
2.3.1 Pollution prevention	24
2.3.2 Product stewardship	24
2.3.3 Sustainable development	25
2.4 Concept of building information modelling (BIM)	25
2.4.1 BIM implementation in Malaysian construction industry	28
2.4.2 BIM and sustainability in construction industry	30
2.5 Concept of circular economy	31
2.5.1 Circular economy and sustainable project performance	34
2.6 Sustainable project performance	35
2.6.1 Sustainable project in Malaysia	37
2.7 Hypothesis Development	38
2.7.1 Building information modelling (BIM) and circular economy practices	38
2.7.2 Building information modelling (BIM) and sustainable project performance	38
2.7.3 Circular economy practice and sustainable project performance	39
2.8 Research Framework	40
2.9 Summary	40
<b>CHAPTER 3 METHODOLOGY</b>	<b>41</b>
3.1 Introduction	41
3.2 Research Design	41
3.2.1 Population	42

3.2.2	Unit of analysis	42
3.2.3	Sampling methods	43
3.3	Questionnaire Design	43
3.3.1	Operationalization of the construct	44
3.3.2	Measurement of independent variable	44
3.3.3	Measurement of dependent variables	45
3.3.4	Measurement of mediating variables	46
3.4	Data Collection	48
3.5	Plan of Data Analysis	49
3.5.1	IBM Statistical Package for Social Science (SPSS)	49
3.5.2	Partial Least Square Part-based Structural Equation Modelling (PLS-SEM)	49
3.5.3	Validity and reliability analysis	49
3.5.4	Hypothesis testing	50
3.6	Summary	50
<b>CHAPTER 4 RESULTS AND ANALYSIS</b>		<b>52</b>
4.1	Introduction	52
4.2	Response Rate	52
4.3	Demographic Profile	53
4.3.1	Respondent profile	53
4.3.2	Profile of companies	54
4.4	Descriptive Statistic	57
4.5	Model Measurement	58
4.5.1	Convergent validity	59
4.5.2	Discriminant validity	61
4.6	PLS Predict	63

4.7	Hypotheses Testing	64
4.8	Summary	67
<b>CHAPTER 5 DISCUSSION AND RECOMMENDATION</b>		<b>68</b>
5.1	Introduction	68
5.2	Discussion of the Finding	70
5.2.1	Building information modelling implementation and circular economy practices (Objective 1)	70
5.2.2	Building information modelling implementation and sustainable project performance (Objective 2)	71
5.2.3	Circular economy practices and sustainable project performance (Objective 3)	71
5.2.4	Effect of circular economy practices on BIM and sustainable project performance (Objective 4)	72
5.3	Implication of the Study	73
5.3.1	Theoretical implication	73
5.3.2	Practical implication	73
5.4	Limitation of Research	74
5.5	Suggestion for Future Research	74
5.6	Conclusion	74
<b>REFERENCES</b>		<b>76</b>
<b>APPENDICES</b>		<b>85</b>

## LIST OF TABLES

Table 2-1 Malaysia GDP in various industry until July 2021	21
Table 3-1 The Four-point Likert Scale	44
Table 3-2 The item adoption for BIM	44
Table 3-3 The item adapt for sustainability project performance	45
Table 3-4 The item for circular economy recycle practice	46
Table 3-5 The item for circular economy reuse practice	46
Table 3-6 The item for circular economy resource efficiency practice	47
Table 3-7 The item for circular economy reduce practice	48
Table 4-1 The response rate to the questionnaire	52
Table 4-2 Demographic profile	53
Table 4-3 Profile of companies	55
Table 4-4 The descriptive analysis	57
Table 4-5 Cross Loading	59
Table 4-6 Evaluation measurement model	60
Table 4-7 The Discriminant Validity: Fornell and Larker Criterion	61
Table 4-8 The Discriminant Validity: HTMT Statistic	62
Table 4-9 F-square and R-square	62
Table 4-10 The Q <sup>2</sup> predict value	63
Table 4-11 Path coefficient (direct effect)	64
Table 4-12 Path coefficient (indirect effect)	66

## LIST OF FIGURES

Figure 2-1 Malaysia GDP from construction industry	21
Figure 2-2 The value of construction done in the third quarter 2021	22
Figure 2-3 A Natural-Resource-Based View: Conceptual framework based on S. Hart (1995)	23
Figure 2-4 Loss of information caused by disruptions in the digital information flow based on (Mohammed, 2008)	25
Figure 2-5 The concept of BIM based on (Borrmann et al., 2018)	26
Figure 2-6 BIM use cases and their mutual dependencies across the different phases of a construction project based on (Jospeh, 2011)	27
Figure 2-7 BIM shifts planning and design decision to earlier phases based on (Mohammed, 2008)	28
Figure 2-8 The adoption of BIM in Malaysia based on CIDB BIM Report 2016 (2017)	29
Figure 2-9 The adoption of BIM by profession in Malaysian based on CIDB BIM Report 2016 (2017)	29
Figure 2-10 The circular economy concept by United Nations Industrial Development Organization (UNIDO)	31
Figure 2-11 The HP closed-loop cartridge recycling based on (Valavanidis, 2018)	32
Figure 2-12 Illustration of the construction value chain for buildings based on (Wong et al., 2019)	33
Figure 2-13 Underlying concepts of sustainability development Triple Bottom Line Model based on (Kalsum et al., 2018)	36
Figure 2-14 The Nature-Resource-Based View in Firm (NRBV) Framework	40
Figure 3-1 Central and Non-central distribution for sample size	42
Figure 4-1 Framework path model	58

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