營建業實施智慧企業 BIM 變革影響之研究

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摘要

John Tobin(2013)提出 BIM 是一種破壞性創新科技。因為 BIM 滿足了之前沒有預期到或根本就不能滿足的需求。對建築、工程、建造產業的未來將產生顛覆性的影響。但企業由於受限於傳統維持性創新科技的影響，不易察覺環境的變化，或吸收能力不足，不易實施 BIM。本研究建立了環境識別能力、知識吸收能力、營建企業實施 BIM 變革和路徑依賴之間的關係模型，運用結構方程式進行實證分析。

目前，雖然許多研究結果都表明環境識別能力、知識吸收能力對組織變革具有直接的促進作用。但針對營建業探討環境識別能力、知識吸收能力對 BIM 變革的影響路徑卻很少得到關注。因此，關於環境識別能力、知識吸收能力對組織變革關係的實證結果很難用於指導建築業實施 BIM 的實務。另外在環境識別能力、知識吸收能力促進企業 BIM 變革提升的實現過程中，路徑依賴的特性是否存在，是否對 BIM 變革的提升產生影響，這些都需要進一步驗證和研究。基於此，本研究建立了知識吸收能力、路徑依賴和 BIM 變革之間的關係模型，運用結構方程式對研究資料進行實證研究，明確知識吸收能力、路徑依賴影響企業 BIM 變革的實現路徑。本文研究可以進一步豐富該領域的研究成果，同時對營建業引進 BIM 進行破壞性創新提供有價值的啟示。

關鍵字： BIM、破壞式創新、路徑依賴、吸收能力

Abstract

John Tobin (2013) proposed that BIM is a disruptive innovation, because BIM meets requirements that were not anticipated or could not be met at all. It will have a disruptive impact on the future of the construction industries. However, due to the influence of traditional maintenance innovation technology, enterprises are not easy to detect changes in the environment, or have insufficient absorption capacity, and it is difficult to implement BIM. This study establishes a relationship model between environmental recognition ability, knowledge absorption ability, construction enterprise BIM transformation and path dependence, and uses structural equations for empirical analysis.

At present, although many research results show that environmental recognition ability and knowledge absorption ability have a direct promotion effect on organizational change. However, the impact of the environmental recognition capability and knowledge absorption capacity on the BIM transformation in the construction industry has received little attention. Therefore, the

empirical results of the relationship between environmental recognition ability and knowledge absorption ability on organizational change are difficult to guide the implementation of BIM in the construction industry. In addition, in the realization process of environmental recognition ability and knowledge absorption ability to promote enterprise BIM transformation and improvement, whether the characteristics of path dependence exist and whether it affects the improvement of BIM reform, these need further verification and research. Based on this, this study establishes a relationship model between knowledge absorption ability, path dependence and BIM change, and uses structural equations to conduct empirical research on research data, and clarifies the knowledge absorption capacity and path dependence to influence the realization path of enterprise BIM change. This research can further enrich the research results in this field, and at the same time provide valuable inspiration for the construction industry to introduce BIM.

Keywords: BIM, disruptive innovation, path dependence, absorptive capacity