

## **The Adoption Rate of Prefabricated Construction: Review and Future Directions**

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### **ABSTRACT**

The global construction industry is attempting a range of techniques to improve its standards at all levels. Prefabricated Construction (PC) is one such technique where a component or entire structure is manufactured in a controlled environment and then installed on the construction site. Regardless of the fact that prefabricated construction dates back to the late mid-1950s, it really has started to receive more attention in the last two decades. The construction industry throughout the world is always attempting to enhance prefabricated technology acceptance by adding latest technologies such as BIM and IoT applications, yet the rate is either very low or moderate. Although the construction industry is gradually implementing the PC, still it has its own way to improve in many aspects. This study aims to bring out the adoption rate of PC in the global level and the impacts made by the PC in the real market by studying the research articles published in the various journals. The three-step procedure used in this study comprised bibliometric search, coupled with quantitative and qualitative analysis. According to the statistical analysis, the United States, Canada, Australia, and the United Kingdom, as well as China, are the most popular countries for modular construction, followed by Malaysia, Singapore, Hong Kong, Germany, South Korea, Sweden, and India. The qualitative approach revealed current research trends in the PC as well as information gaps in the current study, such as a lack of design codes, transportation challenges, a lack of training and investors, a lack of connectivity systems, and managerial concepts. In addition to the foregoing, there is a prospective study direction in PC that may aid researchers in their efforts to enhance technology adoption in this field.

**Keywords:** *Prefabricated Construction, Modular Construction, adoption rate, BIM, IoT applications*

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