

Industrialized construction chronology: the disputes and success factors for a resilient construction industry in Malaysia

ABSTRACT

Background: The construction industry needs to be resilient in Malaysian economy because it contributes significantly to its socio-economy, gross domestic production, and positive employment ratios. **Objective:** This study is a chronological review of the fundamental issues related to the industrialization of construction in Malaysia. It covers different aspects of industrialized building systems (IBSs), which have the potential to promote productivity resiliency by stakeholders in Malaysian construction industry. **Method:** Furthermore, this study examines the fundamental issues related to current terminologies and the numerous classifications of industrialized construction. It also examines related works that support potential critical success factors and the current disputes affecting the adoption of industrialized construction in Malaysia. **Discussion and Conclusion:** This study redefines an IBS as a computer-integrated design, manufacturing, and construction system, using the concept of off-site or on-site prefabricated mass-production techniques within a controlled environment. Furthermore, the system uses proper coordination and planning to transport, position, and install building components with minimal in-situ work. With the success of modern methods of construction, IBS is expected to transform construction industry practices through the application of manufacturing and mechanization concepts. The study concludes by recommending incorporation of computer-aided learning technology at all workforces' training levels when learning IBS applications. It is expected that this will improve performance in terms of construction quality, waste reduction, occupational safety, cost effectiveness, and productivity.

Keyword: Industrialized construction; Industrialized building system; Modern method of construction; Prefabrication; Construction training; Construction informatics