UNDERSTANDING SUPPLY CHAIN MANAGEMENT (SCM) IN INDUSTRIALISED BUILDING SYSTEM (IBS) IN MALAYSIAN CONSTRUCTION

RESEARCH MANAGEMENT INSTITUTE (RMI)
UNIVERSITI TEKNOLOGI MARA
40450 SHAH ALAM, SELANGOR
MALAYSIA

BY:

ASSOC. PROF. SR. DR. HJ. MOHAMMED FADHIL MOHAMMAD
ANI SAIFUZA ABD SHUKOR
ASSOC. PROF. DR. ROHANA MAHBUB

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5.2 Enhanced Executive Summary

IBS involves relationships among various organisations, and includes the evolution of many specialised roles and embedded players. However, the fragmentation and adversarial relationship scenario in the IBS of the Malaysian construction industry leaves supply chain players with noticeable difficulties in terms of integration competitiveness. Although efforts have been undertaken to enhance the IBS practice, establishing integration among IBS players remains a major hindrance due to the lack of supply chain procurement practices. Thus, the Malaysian IBS has been challenged to achieve supply chain integration to enhance the performance delivery of IBS projects. At the same time, the SCM concept has been recognised as a tool for achieving better integration amongst construction players. However, understanding SCM has become a hindrance in Malaysia. Various interpretations of the SCM concept make the process of achieving and supporting the entire SCM approach quite challenging. Considerable confusion also arises because SCM is viewed from a number of perspectives for several reasons. To improve the management and integration of the supply chain, understanding SCM is very important, and various problems and barriers of managing IBS supply chains must be addressed properly. Furthermore, to realise the government's aspiration, good approach and arrangement of supply chain should be investigated and fully established. The objectives of the present research project are to identify the understanding of SCM concepts, investigate current problems and barriers of SCM in IBS construction, and determine the approaches of IBS project within the supply chain in project delivery. To clarify the importance of implementation of the SCM concept, a literature review is presented. The review offers an analysis of the various definitions of SCM adopted by different sectors. The questionnaire survey is adopted to underpin the variables for understanding SCM and its key features as well as the purpose from the standpoint of IBS players. To establish understanding of the area to be studied, analysis of the approach of IBS project with regard to the arrangement of procurement methods being undertaken is performed through qualitative semi-structured interviews. The findings highlight the need for evaluation of the development of SCM definitions and concepts because such development will partly influence the establishment of a suitable definition and understanding of SCM within the IBS construction industry. Furthermore, the findings show that the problems related to supply chain in the procurement implementation are common among players, especially in the construction and design stages, which have contributed to project delays and cost overrun. Findings also reveal that while both procurement approaches vary in their roles and responsibility to the individual project, management of supply chains remains as one of the key elements in all procurement methods. Finally, the findings will benefit both the academia and the Malaysian IBS project delivery players. These will provide new insights on the theoretical perspectives of supply chain integration in improving IBS construction.

5.3 Introduction

The construction industry has commonly been plagued by fragmentation issues. These issues are attributed to the fact that the industry is made up of separate parties from diverse professions that operate by their own rules. An analysis of the key characteristics of the construction industry indicates that the problems facing construction can be categorised into five broad areas (Morledge et al. 2009) which are: fragmentation, adversarial relationships, project uniqueness, separation of design and production and competitive tendering. In addition, weaknesses are caused by the increase in organisational complexity and contractual adversity which influence the efficiency and effectiveness of construction project teams (Dulaimi et al. 2001). Its complexity has been deemed to be very disintegrated and a more integrated approach to supply chain has been identified as a solution to various problems (Vrijhoef and Ridder, 2007).

Thus, in today's increasingly globalised economy, managing the entire supply chain has become vital to the successful completion of a construction project. The strategy to manage economic demand through construction will be more effective when projects are implemented innovatively and speedily. Furthermore, for Malaysia to be a productive and high-income nation, Malaysians must be globally competent and competitive. This necessitates the Malaysian government to embark on rigorous initiatives and adopt the Industrialised Building System (IBS) as an innovative approach. As a consequence, the importance of IBS was highlighted under Strategic Thrust 5 of Construction Industry Master Plan (CIMP), and the IBS Roadmap 2003–2010 (1st phase) and 2011–2015 were designed to assist Malaysia in capitalizing new technologies and IBS-related issues. A series of supports and initiatives have been designed to educate the construction supply chains in order to move IBS implementation forward and improve IBS performance.

IBS provides speedier work completion due to the introduction of components replacing on-site construction. The use of IBS assures valuable advantages in context of the local construction scenario but the recent research into the Malaysian construction industry discovered, this transformation is slow in its progress and the performance and productivity of the construction industry have been reported to be inefficient in comparison to other industries. Even with much support, encouragement and directions in Malaysia, the usage of IBS is currently much lower than it could be. These problems demonstrate that although the long introduced IBS has promised to solve and improve the current construction process, these practices have characteristically been facing a difficult task to establish integration and cooperation between parties involved (CIMP, 2007; Faizul 2006).