

**UNIVERSITI TEKNOLOGI MARA**

**A FRAMEWORK FOR  
PROJECT CAPITAL MANAGEMENT  
IN RAIL JOINT VENTURE  
PROJECTS**

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## ABSTRACT

The railway infrastructure development via collaboration methods is extensively recognized by the world as many prosperous infrastructure developments are established with the aid of joint venture. One of the reasons why collaboration is adopted is because of the economical marriage concept applied in the project. Despite the reason to collaborate are technology exchanges, transferring expert, and cultural reason, the other imperatives collaboration endeavour is pertaining the business strategy of the organisation. In Malaysia, the government forms allies to partially be funded by the term of Public Private Partnership, under the privatization act in the country. However, with the increase of total variation order, cost overrun and the loss of profit of the company that constructs railway, it becomes a major concern as the financial handicap is constantly associated to the partner fit in the organization. The structure of the partner fit can be classified into management, governance, and profit-sharing structure and project capital. Throughout the project employment, the project capital deemed to have lacked in extensive financial and capital resources, project capital control, and the divergence in the project capital standard, as well as major constraints to improve the project capital efficiency. Therefore, the aim of the research is to develop a project capital implementation framework for rail joint venture project. The main objectives are to analyse the project capital resources in railway joint venture project, to investigate the utilisation of the project capital in railway joint venture projects, to determine the project capital selection criteria, and to examine the steps to improve the project capital in railway joint venture projects. The research employed quantitative and qualitative approach which comprises preliminary survey, main questionnaire survey, documents analysis and semi-structured interview, where the perceptions were gathered from the railway clients and railway contractors. The sampling process was run according to the purposive samplings, where the personnel that involved with the railway projects were selected to answer the research enquiries. The findings revealed that the project capital resource varies and the capital resources preferred by the practitioner are project capital with risk related consideration such in form of project bond. In addition, the results on the project capital utilisation level have shown that the construction becomes costly due to advanced works and system projects elements such as high technology application to execute the demolition works and railway system. The project capital selection criteria indicated the highlights on the legal instruction that emphasise on the condition of contract determination, as well as time related basis for the investor to extend their investment approach. The project capital shall familiarise with the improvement strategy on the shares and rate of return on the growth phase, flexibility and control on the suitability phase and risk and ownership on the termination phase as the corrective measure will be undertaken to improve the project capital stability. Based on the results, the framework had been produced with the further validation from the railway construction expert. The recommendation involved the flexible project capital resources requirement, the delivery of accurate project cost estimate, regulated the project capital requirement and detailed improvement strategy were recommended to enhance the research topic.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1. BACKGROUND OF THE RESEARCH**

The global economic arena is inevitable and has become an obligatory international exchange practiced in most countries to become one of the nations to achieve the efficacious climax via being an economically remarkable country. This stimulating circumstance is pragmatic to be applied worldwide, including Malaysia. The country is endorsed by the International Monetary Fund and World Bank reports as an exemplary model for successful economic development (Malaysian Investment Development Authority, 2016; World Bank, 2015). The expansion of the economic trajectory has been stimulated mainly by the growth of industries as such manufacturing, agriculture, tourism, and as well as the growth of the construction industry. The industry has offered sophisticated technology to keep the industry feasible to cater greater demand and practitioner competition in the future (Adnan & Morledge, 2003; Shaoul, Shepherd, Stafford, & Stapleton, 2013). Notwithstanding, the construction industry in this country may not successfully be implemented without the reassurance obtained from the government via its substantial empowerment to promote the joint venture collaboration among the practitioners.

The Malaysian government introduces Construction Industry Transformation Plan (2016) to encourage the internationalisation thrust, alongside safety, quality and professionalism thrust, environmental sustainability thrust, and productivity thrust. The internalisation thrust which shields the joint venture aspect inspires Malaysian construction players to obtain reputation as the international players on the global level, as well deliberately augmenting their position among the domestic brands. The deployment of the professional workforce with technology and skilled expertise are envisioned to showcase the local organisation performance to the global arena. The implementation of the joint venture is secured by selected trade rules which are part of the ASEAN Free Trade Area, administered by the government to support free flows of goods, services, and capitals among the ASEAN members. Another key initiative endorsed by the government is by a maximum utilisation of ASEAN Economic Community (AEC) (Malaysian Investment