

**UNIVERSITI TEKNOLOGI MARA**

**INDICATORS OF LABOUR  
PRODUCTIVITY IN THE  
MALAYSIAN CONSTRUCTION  
FIRMS: THE IMPACT OF CAPITAL  
INTENSITY AND MODERATING  
EFFECT OF MARKET  
REGULATION**

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## ABSTRACT

The construction industry plays a vital role in the economy, yet the industry has been plagued by stagnant productivity change over time. Understanding the reasons behind this slow productivity growth is crucial for the industry's sustainable firm profitability and the improvement of wages among the industry workers. Both internal and external factors can contribute to changes in labour productivity. Consequently, the objectives of the study are to identify the level of capital intensity, market regulation and labour productivity in Malaysian construction firms, to determine the impact of capital intensity on labour productivity in Malaysian construction firms and to produce model of the interaction effect of capital intensity and market regulation on labour productivity in Malaysian construction firms. This study aims to examine the influence of capital intensity and the moderating effect of market regulation on labour productivity. To achieve this aim, this study employs quantitative method using the collection of data from 55 publicly listed construction firms' financial data and Malaysia's economic data to determine the levels of capital intensity, labour productivity, and market regulation from 2009 to 2020 by using purposive sampling. For modelling, the two-stage least square (2SLS) method is employed to mitigate endogeneity in assessing the impact of capital intensity, market regulation, and their interaction on labour productivity. In this study, R-Software is being used to analyse the collected data. This study sheds light on the long-term effects of capital intensity and the moderating influence of market regulation on labour productivity. Previous research shows the average trend of declining labour productivity and increasing capital intensity uptake over the years. However, 2SLS illustrates a positive impact between capital intensity and labour productivity in Malaysian construction firms, particularly when controlling firm-specific effects and the time-variant effect of the economic environment. Also, this study reveals the interaction effect between capital intensity and market regulation indicators that include economic and capital freedom (ECF), property rights and rule of law (PRRL), foreign debt & exchange rate (FDER) and budget balance & wage in change (BBCW). The outcomes of moderating market regulations indicates that both ECF and FDER negatively affect the impact of capital intensity-labour productivity which is a one-unit increase in ECF is associated with approximately a 0.36% decrease in labour productivity, and a one-unit increase in FDER is associated with approximately a 0.30% decrease in labour productivity. This study suggests policymakers to strike a balance between capital-intensive investments and effective market regulations. This balance is essential to achieve optimal productivity outcomes. The government also must play a pivotal role in facilitating the adoption of new technologies and improving the capital intensity of construction firms. Continuous research and monitoring of these factors are essential to gain a deeper understanding of their dynamics that can enhance productivity and drive economic growth in the construction industry.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Introduction**

This chapter describes the scope of research related to capital intensity, market regulations, and labour productivity. This chapter discusses the specific aspects and dimensions that have been examined throughout the study. This includes defining the problem statement, stating the overall aim of the research, outlining the research objectives, and defining the scope of the research. Firstly, the problem statement highlights the central issue or challenge that this study seeks to address. By clearly defining the problem, the researcher can provide a context for the subsequent research analysis and demonstrate the relevance and significance of the study. Next, the aim of the research was stated, elucidating the purpose of the study. This aim serves as a guiding principle throughout the research process, providing direction and focus. Following the aim, the research objectives are being outlined. These objectives define specific goals or outcomes that need to be achieved to fulfil the aim of the research. Each objective serves as a building block towards a comprehensive understanding of the relationship between capital intensity, market regulations, and labour productivity. Finally, the scope of the research was defined, boundaries were set, and the specific context, time frame, and geographical or industrial focus of the study was identified. By clearly setting out the scope, the research remains focused and manageable within the available resources and time constraints. Through this chapter, readers can gain a comprehensive understanding of the research framework and the road map that was followed in subsequent chapters. The discussion of the problem statement, aim, research objectives and scope of the research serves as a foundation for the empirical analysis and findings that are presented later in the thesis.

### **1.2 Research Background**

The construction industry plays a crucial role in the economy, but its productivity growth has been sluggish globally and in Malaysia. According to a McKinsey report, the industry's productivity improvement has not been satisfactory.