

# Chapter 14

## Applying Total Costs of Ownership (TCO) to Examine the Best Logistics Providers: Case Study in Indonesia Cement Projects

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### ABSTRACT

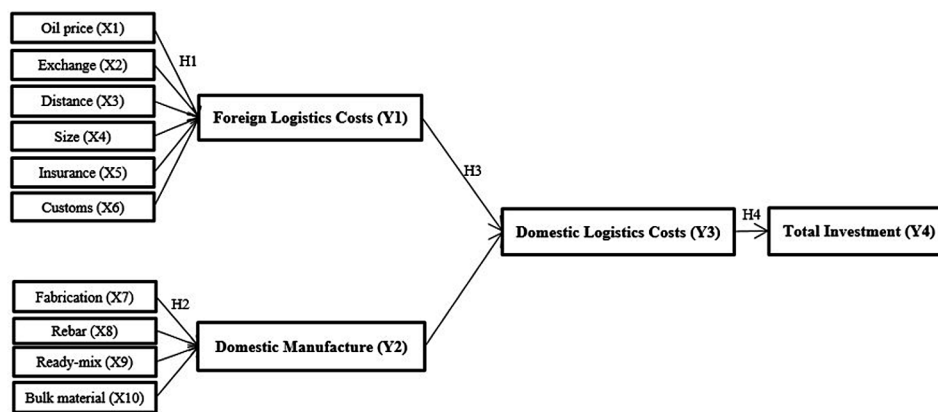
*Further scientifically finding of total logistics costs model during execution the cement projects in Indonesia, the consecutive further tasks are how to examine the best logistics' provider to perform the logistics' works. This is the ultimate goal of this chapter. The methodology developed is by case study, elaborate techniques of focus group discussion (FGD), expert judgment (EJ), and enriched by the analytical hierarchical process (AHP) to obtain the best decision. The finding is the total costs of ownership (TCO) as the best tool to examine several considerations to select the best provider's candidates can be applied. Data as sources of this chapter are consolidated from the cement projects in Indonesia from 2010 to 2018. During the period, cement projects in Indonesia were rampant, and certainly, it demanded logistics providers. The TCO in practical fits during procurement-processes, it is also valuable during the selection of the logistics' providers. The TCO is fair enough as the best tool to build governance during procurement to avoid miss-discrimination-treated.*

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## INTRODUCTION

After the concept of total logistics costs had been populated by Subiyanto (2020), further tasks to complete construction projects are going to be increased and detailed. According to Figure 1, three primary elements must be highly concerned. The first is foreign logistics costs; the second is domestic manufacture and the third is domestic logistics costs. All three elements are separated but altogether have directly and indirectly influenced the ultimate goal of the total investment.

Figure 1. Conceptual model populated by Subiyanto (2020)



According to the results of Figure 1, variable crude oil prices, exchange rates, distance, sizes, insurance and customs all have a significant impact together but not significantly partially on the foreign logistics costs. Further, variable fabrication, rebar, ready-mix, and bulk material together and partially are significant to the domestic manufacture costs. The next is assessing variable foreign logistics costs and domestic manufacture costs that are significant together but not significant partially on domestic logistics costs. Finally, the domestic logistics costs variable is found to be significant in the total investment.

The recommendation for the cement investors and managers is that they should put high concerns, especially for the foreign logistics costs caused the highest costs contribution than others to the model. Subiyanto (2020) advises that this has an important policy implication for the government, urging that investment in the logistics infrastructure become a high priority to reduce total logistics costs. This suggests that the government should immediately build and develop a chain of logistics infrastructure to lower logistics costs that account for 27% of Indonesia's GDP, which is the highest proportion among countries in the region. These costs would be significantly reduced with better infrastructure.

It is now a knowledge gap that occurred. Theoretical has been developed, but how to make it real and definite to be valuable applied is still questioning.

In general, Figure 2 is ordinary known and widely adopted in procurement stages. At first, the vendors have submitted their proposals in a couple of methods, a technical proposal, and a commercial offer. The further step is evaluation followed by clarification, and the last stage is a negotiation and to be completed by awarding the contract to the winner.

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