ABSTRACT

New product launch in Indian market has its inherent risks with multiple constraints in the form of logistics infrastructure and resources. The extended literature survey indicates that logistics costs have been studied in automobile supply chains with reference to multiple stages of the product. However, there is little research conducted on examining logistics costs in the new product launch stage. This study evaluates the importance of inbound logistics cost in the overall supply chain management (SCM) in the automobile sector. It focuses on logistics costs incurred to bring components from suppliers located across the country (within country) to the automobile assembly plant and attempts to optimise the cost. The five variables namely supplier distance, part volume, packaging cost, cubic efficiency, handling cost – that have significant impact on logistics cost have been identified, and a hypothetical model has been established to explain the causal relationship between these variables and logistics cost. The mixed research method, which is a combination of case study, model building, Survey and experimentation, is adopted for the purpose of this study. Structural equation model has been chosen as a statistical tool to establish theoretical model.

More than 500 components’ cost data was collected for the case study, and the relationships between six identified variables have been examined through Structural Equation Model. SPSS AMOS software has been used to analyse the data and to validate the hypothetical model. The evidence indicated that there is positive relationship between supplier distance, part volume, packaging type, cubic efficiency, handling cost and logistics cost (at 1% level of significance). This suggests that there is an opportunity for
logistics cost reduction, by exploring the chosen variables. To generalize the established hypothetical model, an industrial survey Automobile sector was conducted using google chrome Questionnaire. Also the model experimented in the chosen case firm and achieved cost reduction in logistics.