

## ESTIMATING HANDLING TIME IN RETAIL STORE IN SUPPLY CHAIN

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### Abstract

Retailing consists of all activities involved in selling goods and services to consumers for their personal, family or household use. Retailing is one of the pillars of the economy in India and accounts for 35% of GDP. In today's global environment, many retailers are focusing on reducing costs as a means of achieving operational excellence. Majority of the operational costs are handling costs. In the present work we have developed a model which not only describes the handling process but also estimates the Total Handling Time per product unit in the hyper store when replenishment of an item is from the backroom. Total handling time includes traveling time of product from backroom to shelf in the hyper store and the time needed to stack the product on the shelf. To test the model, empirical data on the handling operation was collected at a hyper store using a stop watch. The data were collected for the entire set of product groups available at hyper store. Data was analyzed using multiple regression through SPSS software. The value of R,  $R^2$ , t-test, F-test, examination of residual, value of VIF and tolerance indicate that our model is valid. The assumptions made for the regression are met. Thus, it can be said that the model proposed in this work for a sample can be accurately applied to the population of interest. Finally, cross-validation of the model has also been carried out using Stein's equation .

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