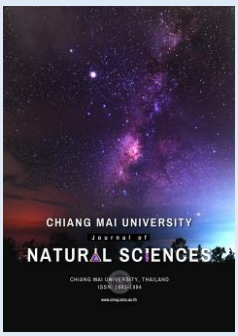

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Corresponding author:
Chompoonoot Kasemset,
E-mail:
chompoonoot.kasemset@cmu.ac.th

Research article

The Application of Revenue Management in Chilled Storage Area Allocation: Simulation Study

Chompoonoot Kasemset*, Tattayana Pangsuta, and Chawis Boonmee

Department of Industrial Engineering, Faculty of Engineering, Chiang Mai University, Chiang Mai 50100, Thailand

Abstract Resource planning in service industries is a difficult task and quite different from resource planning in manufacturing. Revenue management is one concept used in service industries when capacity and inventory are challenging to identify. In this study, the company case study provides chilled storage areas for customers. Different products are served and service charging is calculated based on the product's weight and storing time. Currently, the target revenue cannot be achieved. This study presents the application of revenue management in chilled storage area allocation. From a previous study, there were four classes of products based on their importance level as A, B, C and D. Among all classes, the cost of under and overestimating demand was calculated for setting up the area allocation by following the concept of revenue management. Monte Carlo simulation was applied to simulate the existing and improved systems. The simulation results indicated that the average daily revenue could be improved when the storage area allocated to the lowest priority class (class D) was limited to be equal to the average daily demand of class D. Applying the proposed policy can help in increasing yearly revenue by approximately 73,638.75 Thai Baht. Finally, the implementation of the proposed procedure was discussed under the concept of Logistics 4.0.

Keywords: Revenue Management, Simulation, Warehousing

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