

Model, analysis and application of employee assignment for quick service restaurant

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Abstract

This paper not only applies queuing theory with finite servers and queuing capacity to the mathematical model called optimal employee assignment (OEA) model, but also introduces the customer reneing function into its objective to search the cost minimization with the consideration of the customer arrival rate. Additionally, different employee experience in related job presents different service time and wage payment in this study. Moreover, a step-by-step algorithm to achieve the optimal employee assignment for open counters of the quick service restaurant is also provided. Furthermore, a computerized tool written by Visual Basic 6.0 to reach the minimum total system cost as well as perform the simulated analysis is completely proposed. The application of OEA model in constructing a decision support table for a case restaurant is also followed. This study definitely contributes a practical computerized tool for decision makers in employee management.

Keywords : *Queuing capacity, customer reneing function, computerized decision tool, employee management.*

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