

An M/M/c/N Feedback Queuing System with Encouraged Arrivals, Reverse Reneging and Retention of Reneged Customers

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Abstract: *In this paper authors have modelled current competitive business scenario of firms giving heavy discounts and offers to attract customers and encourage them to join the system to avail service. The impatience rate of such customers is usually very low, which results in huge customer base and may sometimes results in chaotic situation if not managed effectively. Firms who fail to manage the waiting time of customers in the queue may face detrimental consequences in terms of loss of business or goodwill. Often huge customer base puts pressure on the service channels leading to some level of dissatisfaction among certain customers availing service. Such customers may re-join the queue to avail service satisfactorily. Stochastic queuing model developed and solved in this paper for the system facing issues mentioned above can help firms measure their performance well in advance and device strategies for effective management of the system.*

Key words: encouraged arrivals, multi-server queuing model, reverse reneging, feedback customers, retention