

## ABSTRACT

Overbooking is a strategy for any airlines to accept more reservations for flights than seats available. This allows them to have a (nearly) full vehicle on most runs, even if some customers miss the trip or cancel at the last minute because of a certain percentage of passengers are expected to be "no-shows". The cost that airlines have to pay to the overbook passengers affects revenue substantially is called Profit Loss. However, the airline also does not want to sacrifice quality as well and both of this loss must be minimize. Towards this problem, we develop a significant model using Binomial distribution together with Taguchi Quality Control method in overbooking to gain more profit besides reducing quality loss in both for one fare and two fare classes. We optimize expected profit loss and profit by choosing the optimal values of reparations and overbook tickets.