

## **ABSTRACT**

*A dynamic pricing strategy on the cooperation between a hotel and an online travel agency (OTA) is commonly applied to build a pricing policy. The purpose of this study is to propose a pricing policy according to the dynamic pricing model on a single online travel agency channel. The paper provides a dynamic pricing model adjusted to hotel problems with multiple room standards. The study consists of two stages. First, we apply a revenue management tool that is dynamic pricing to model the effect of price on demand. The price dynamically changes based on the parameter of demand model. Second, we use a nonlinear integer programming approach to maximize the profit by substituting the demand model which has the lowest root mean square error. The parameter of the demand model is estimated by using the historical sales-price data from one of the hotels in Bandung, West Java, Indonesia. Our results propose a pricing policy of each room standard that able to increase 18.54% from the historical sales profit. The proposed pricing policy completes the gap of the method in the existing pricing policy. Moreover, the findings provide an optimal room rate to the front office manager along the planning horizon.*

*Keywords: dynamic pricing, online travel agency, pricing policy, revenue management*