

ABSTRACT

The main problems faced by retailers are an increase in demand which tends to be seasonal and there is no policy on product prices that are appropriate in certain periods. Intuitive pricing also makes it difficult for retailers to make decisions for the company's strategy. Uncertainty about the conditions and the absence of the method used will have an impact on sales profits.

The purpose of this research is determining optimum pricing with dynamic pricing model where this model will produce optimum pricing policies based on historical demand and several policies set by retailers. This research uses dynamic pricing to maximize revenue by modeling the effect of price on demand. The demand model that will be used is a linear model and an exponential model because this research considers the influence of the price variable (X) on the sales quantity (Y). Furthermore, the research uses linear programming optimization approach by considering the demand model that has the lowest error value.

The demand model chosen for each season based on the RMSE value is a linear model for the low season and mid-season, while the exponential model is used for the high season. Based on the dynamic pricing model that has been applied by optimizing the sales profit based on the optimal price variable, it is found that the increase in sales profit in the specified period is 3.25% for the low season, 5.44% for the mid-season, and 34.48% for the high season.

Keywords: dynamic pricing, exponential demand model, high season, linear demand model, low season, mid-season