Modeling Nonlinear Relation from Customer Satisfaction to Loyalty

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Abstract

Customer Satisfaction Index (CSI) employs a model for measuring and quantifying the satisfaction of customers who have used particular products and services. CSI provides a uniform measure of customer satisfaction that allows for comparison across industries and it illustrates how customer satisfaction is embedded in a system of cause–effect relationships.

Despite discussions of nonlinear relationship between customer satisfaction and loyalty, CSI has been estimated by a linear model. This study extends linear CSI modeling to investigate nonlinear relationships and compares the two models using real survey data. More specifically, we set a threshold in customer satisfaction and observe how customer loyalty is affected by the level of customer satisfaction. The nonlinearity suggests different patterns of diminishing and increasing returns to loyalty according to the level of satisfaction, which is a distinguished characteristic from linear models.

This paper proposes (1) that a nonlinear model surpasses a linear model and (2) that nonlinear relationships between customer satisfaction and loyalty differ across industries by competitive environment. The nonlinear relationship between customer satisfaction and loyalty exhibits two patterns: (1) an increasing rate of customer loyalty is diminished when customer satisfaction level is above the threshold and (2) an increasing rate of customer loyalty is sharply increased when the customer satisfaction level is above the threshold.

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