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Nonparametric Path Analysis with a Truncated Spline Approach in Modeling Waste Management Behavior Patterns

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Abstract : Nonparametric path analysis is a statistical method that does not rely on the assumption that the curve is known. The purpose of this study is to determine the best truncated spline nonparametric path function between linear and quadratic polynomial degrees with 1, 2, and 3 knot points and to determine the significance of estimating the best truncated spline nonparametric path function in the model of the effect of perceived benefits and perceived convenience on behavior to convert waste into economic value through the intention variable of changing people's mindset about waste using the t test statistic at the jackknife resampling stage. The data used in this study are primary data obtained from research grants. The results showed that the best model of nonparametric truncated spline path analysis is quadratic polynomial degree with 3 knot points. In addition, the significance of the best truncated spline nonparametric path function estimation using jackknife resampling shows that all exogenous variables have a significant influence on the endogenous variables.

Keywords : nonparametric path analysis, truncated spline, linear, kuadratic, behavior to turn waste into economic value, jackknife resampling
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