MODELING THE HIGH SCHOOL DROP OUT RATE IN EAST JAVA USING MULTIVARIABLE SPLINE REGRESSION

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ABSTRACT

Dropout rate to the current problems faced by the government. East Java is one of the provinces that have the potential to contribute to the high dropout rates in Indonesia, especially for high-school age. High school dropout rate is higher than the dropout rate other educational levels. In an effort to encourage 12-year compulsory education, it is necessary to model the dropout rate for high school age to know the factors that cause it. Regression approach used is a multivariable spline nonparametric regression because the data has an unknown pattern of relationships form the data pattern. Determination of best spline regression models based on the selection of optimal knots point. Knots optimal point is determined using the method of Generalized Cross Validation (GCV). The results showed that the regression model is the best spline regression model with a combination of point knots. Variables that significantly influence the high school dropout rate in East Java is the percentage of poor people, the pace of economic growth, the percentage of the schools, and the percentage of teachers.

Keywords: High School Drop Out Rate, Multivariable Spline Regression, Point Knot
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