Abstract

One of the health problem in Indonesia is rising child mortality. The reason is that nutritional needs were not met, so many children is suffering from malnutrition. Modelling the incidence of malnourished children with parametric regression is not necessarily suitable to be applied, because the pattern of the relationship between malnutrition rates with the factors that influencing has the form of a specific pattern. Spline Nonparametric Regression is one of the regression method that does not presume the form of the regression curve. This study aims to determine the factors that influence the incidence of malnourished children in East Java Province. The results showed that by using Spline Nonparametric Regression, minimum GCV values 3.94 are obtained and $R^2$ of 88.77 percent. Another conclusion is derived factors that influence the incidence of malnourished children in East Java in 2007 are the percentage of mothers during their pregnancy, percentage of baby who received vitamin A and the percentage of poor households.

Keywords: Malnutrition, Spline Nonparametric Regression, GCV
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