

ABSTRACT**LINEAR REGRESSION MODELING TO ANALYSIS THE CASE OF
PNEUMONIA DETERMINANT FACTORS WITH
BAYESIAN MODEL AVERAGING (BMA)
in SITUBONDO, 2013****Debbiyatus Sofia**

Bayesian method is known as a better method than other methods, because it combines the information from the sample data and the information from the previous distribution (prior). Bayesian methods can also be applied to cases involving the model uncertainty in the selection of the best model. There are several methods in the Bayesian able to choose the best models involving uncertainty models and one of them is Bayesian Model Averaging (BMA). BMA is a method that can predict the best model based on the weighted average of all models. BMA works by averaging the posterior distribution of all the models that may have formed. BMA goal is to combine model uncertainty in order to get the best model. The results of the estimation model that includes all possibilities to form so they can get a better estimation results. The purpose of the study is to determine the linear regression model of the BMA determinant factor in cases of pneumonia toddler Situbondo. Design research is applied research. The experiment was conducted in Situbondo District in May-June 2014. Sampling units in the study were 17 health centers Situbondo. The results showed a linear regression model of the BMA produces a significant number of variables greater than the linear regression model. Significant variable in a linear regression model of the BMA are not smoking in the home, healthy household, exclusive breastfeeding, infants received vitamin A, DPT immunization coverage, low birth weight, malnutrition children, number of posyandu and children under five services.

Keyword: Multiple Linear Regression, Bayesian Model Averaging, Pneumonia