

ABSTRACT**MULTIPLE LINEAR REGRESSION ESTIMATES WITH PANEL DATA
GENERALIZED METHOD OF MOMENT (GMM) INCIDENT NUMBERS
OF MALARIA DISEASE IN NORTH MALUKU 2010-2014**

The reason of using GMM is this method as asemiparametric estimation which used frequently on data which has some information about the distribution (Greene, 2008). The incidence of malaria is closely related to climate change that affect the growth and spread of various infectious diseases, including through the intermediary of mosquitoes. Climatic factors is one of the indirect factors that affect the occurrence of malaria. The climatic factors are the air temperature, precipitation, solar radiation, humidity and wind speed. North Maluku is one of the endemic area of malaria. This study aims to estimate parameters of multiple linear regression model panel data with Generalized Method of Moment (GMM) and apply multiple linear regression panel data with GMM estimates on the incidence of malaria to the climate through data of 2010-2014 in North Maluku. This study include the study of non-reactive. The data obtained from the Department of Health Malaria North Maluku while climate of BMKG of. North Maluku Province in 2010-2014, the results of multiple linear regression analysis using panel data with GMM estimation was found that from the five predictor variables that consist of temperature, humidity, rainfall, wind speed and solar radiation, there only three variables (rainfall, wind speed and irradiation Sun) that affect to the incidence of malaria inNorth Maluku Province. Effective contribution to Y, with the value of R square = 0.934. This indicates that the effective contribution of variables significantly to the rise and fall of Y by 93.4%, while other factors contribute to the Y at 6.6%.

Keywords: Panel Data, GMM, Malaria and Climate.