

Geo-spatial Analysis: The Impact of Drought and Productivity to the Poverty in East Java, Indonesia

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Abstract : Climate change is one of the focus studies that many researchers focus on in the present world, either in the emerging countries or developed countries which is one of the main pillars on Sustainable Development Goals (SDGs). There is on-going discussion that climate change can affect natural disaster, namely drought, storm, flood, and many others; and also the impact on human life. East Java is the best performances and has economic potential that should be utilized. Despite the economic performance and high agriculture productivity, East Java has the highest number of people under the poverty line. The present study is to measuring the contribution of drought and productivity of agriculture to the poverty in East Java, Indonesia, using spatial econometrics analysis. The authors collect data from 2008 - 2015 from Indonesia's Ministry of Agriculture, Natural Disaster Management Agency (BNPB), and Official Statistic (BPS). First, the result shows the existence of spatial autocorrelation between drought and poverty. Second, the present research confirms that there is strong relationship between drought and poverty. the majority of farmer in East Java are still relies on the rainfall and traditional irrigation system. When the drought strikes, mostly the farmer will lose their income; make them become more vulnerable household, and trap them into poverty line. The present research will give empirical studies regarding drought and poverty in the academics world.

Keywords : SDGs, drought, poverty, Indonesia, spatial econometrics, spatial autocorrelation

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