Food Insecurity of Poor Households and Village Potential Infrastructure: A Small Area Estimation Approach in East Nusa Tenggara, Indonesia

Arif Rahman[1], Ika Yuni Wulansari[2]

[1]BPS-Statistics Indonesia, rahman.arif@bps.go.id
[2]Polytechnic of Statistics STIS, ikayuni@stis.ac.id

Abstract:
Coronavirus disease 2019 (COVID-19) has impacted every aspect of life and raises important issues related to poverty and food insecurity in all countries, including Indonesia. As a response to COVID-19 cases in Indonesia, the government applies large-scale social distancing in several regions. These actions slowed the commercial and industrial sectors which impacting enormous people losing their job, reflected from the number of poor people increased by more than 1.5 million compared to March 2019. Moreover, the situation presents a high risk for food security due to the decrease in purchasing power and food supply chains not being able to run normally. This study aims to estimate the number of poor households with food insecurity status at the district level in East Nusa Tenggara using Small Area Estimation (SAE) technique using Empirical Bayes with the Poisson-Gamma model as the parameter estimation method. The data used is National Socio-Economic Survey (SUSENAS) 2020 and also Village Potential Data Collection (PODES) 2018 as auxiliary information to do an indirect estimation. The result shows that more than half of poor households in East Nusa Tenggara are having food insecurity, namely 611,22 thousand (52.98 percent). Furthermore, the districts with the highest number of poor households with food insecurity are in Sumba Barat Daya, while the lowest is in Kupang City. A high number of poor households having food insecurity implies that the local government needs to take serious action to overcome food insecurity more effectively, starting from the district having the highest number.

Keywords:
Poor Households, Food Insecurity, Small Area Estimation, Empirical Bayes, Poisson-Gamma Model