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Analysis of food security in Southeast Asia countries

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Abstract

The present study aims to investigate the determinants of food security in nine developing and least-developed countries of Southeast Asia. By adopting fixed effects model of panel regression with interaction terms, using yearly data (2006-2016), the results showed that all explanatory variables are significant, except agriculture land and Foreign Direct Investment (FDI). Employment in agriculture, Consumer Price Index (CPI), and Real Gross Domestic Product (RGDP) positively affect food production. Meanwhile, CO₂ emission and gross fixed capital negatively related to food production. The study also found that employment in agriculture gives negative impact on food production when it interacts with CO₂ emission and agriculture land. When RGDP interacts with CPI, it also contributes negatively to food production. However, gross fixed capital has a positive and significant relationship with food production when it interacts with CO₂ emission. The findings postulate the importance of appropriate policies and innovative programs for agriculture sector to boost food production as well as to hamper food insecurity in Southeast Asia countries. © 2021 Institute of Physics Publishing. All rights reserved.

Index Keywords

Agriculture, Carbon dioxide, Food supply; Agriculture sectors, Consumer price index, Explanatory variables, Foreign direct investments, Gross domestic products, Innovative programs, Interaction term, Least-developed countries; Agricultural robots

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