Review of: "Palm Oil Expansion and Subnational Food Security"

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Potential competing interests: No potential competing interests to declare.

The paper generally addresses a relevant and interesting issue. I would like to appreciate the effort and time that the author(s) invested in coming up with the results. However, the paper is poorly written and highly disorganised. The methodology section is the weakest section of the paper. The variables (both dependent and independent) are not properly operationalized and measured. Rather than the logit model, a proper impact assessment methodology could have been employed to examine the impact of oil palm on food security. This paper requires a major revision. Please see my detailed comments below.

Abstract

Is it vulnerability to food security or insecurity? It should be vulnerability to food insecurity (see line 3).

The purpose of the study is "to examine the impact of oil palm expansion on the food security status at the provincial level in Indonesia (see line 1). In line 7, the author(s) reported the negative effect of food expenditure on food security. Isn't food expenditure part of food security? It is often used as one of the indicators to capture vulnerability to food insecurity.

In lines 6, the author(s) reported the negative impact of oil palm on food security. However, in lines 10–11, the author(s) state, "This suggests that provinces cultivating palm oil have a higher likelihood of achieving food security compared to those that do not engage in the cultivation of this commodity." I think these two findings are contradictory. Please check and correct.

Introduction

Sources are not properly acknowledged (see, for example, paragraphs 1, 3, 4, 6, 7, etc.).

This section is too long and not properly organized. I think the author(s) need to highlight the following issues:

- What is the general topic area? (A short overview explaining the background of the problem to be researched)
- Why is the topic relevant or important? (How important is it to your field of specialization and to the broader readers or community?)
- What are the main debates (theoretical and/or empirical) in the area of your topic? relevant, critical, theoretical, and empirical to the issue(s)

The introduction section is also mixed with the literature review. It should be revisited in such a way that separates the

two. In general, this section requires a major revision.

Methodology

Sources are not properly acknowledged (see, for example, paragraph 2). This section is also mixed with the literature review (factors affecting food security).

The research design is not clear. The author(s) claimed that a mixed research design was employed. But issues related to what type of mixed and why mixed are not explained. How did the author(s) apply a mixed research approach to secondary data?

Sampling design (study population, sampling technique, sample size, etc.) is not properly explained. The unit of analysis is not clear as well.

The measurement of food security and the indicators employed to measure the concept are not explained. How did you measure food security at the provincial level? The dimension(s) of food security (availability, access, utilization, and stability) that the author(s) addressed are not properly explained.

One of the serious problems with this paper is the model that the author(s) used. A logit model could not identify the impact of oil palm on food security. The author(s) may identify factors that affect food security using the model but not the impact. Impact evaluation has its own standard methodology. I kindly ask the author(s) to read impact evaluation methodologies and employ the ones that fit his/her/their dataset.

The author(s) states that the dependent variable "Y" (food security) is a dummy where districts falling into priority categories 1 and 2 (indicating severe food security) were classified as 0 (zero districts) and those falling into categories 3 and 4 (relatively food secure to food secure) were classified as 1 (one). The issue is, which category is food secure and which one is food insecure? Is category one "severely food insecure or secure?" Is there anything called "severe food security"? I think, besides the model choice problem, the dependent variable is not properly operationalized and measured.

Results and Discussion

This section is poorly written and is disorganized. How can the authors start this section by presenting a model specification? First, briefly introduce the chapter and then proceed to the description of dependent and independent variables (present and discuss descriptive statistics of the variables) before presenting and discussing regression results.

Mobile ownership is not specified in the methodology section but is included in the result section. How can access to infrastructure decrease food security? How can you explain this?

How many models did you employ? See your results in Tables 1, 2, 7, and 8.