

Review of: "Land Size Class Wise Growth of Crop Diversification Index: A Case Study From Murshidabad District of West Bengal"

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Potential competing interests: No potential competing interests to declare.

Reviewed comments on the manuscript entitled "**Land Size Class Wise Growth of Crop Diversification Index: A Case Study From Murshidabad District of West Bengal**" submitted to "Qeios" for publication.

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I have gone through the manuscript carefully and with high interest. As a reviewer, my comments are as follows:

General comments: The work is original, and the authors deserve appreciation for their contribution. After that, I made some observations for further improvement of the manuscript.

Title: The title should be "**Land Size Class and Crop Diversification Index: A Case from Murshidabad District of West Bengal**".

Abstract: Rewrite the abstract focusing on some more findings or outputs. "The result reveals an increasing trend of crop diversification in the district" - this sentence is not enough to explain the whole research.

Rewrite the abstract carefully.

Keywords: Add more keywords, at least 5. You may consider livelihood, nutrition security, etc.

Introduction:

- The present study is, therefore, carried out across land size categories in the Murshidabad district of West Bengal.

I'm not clear. Please provide a meaningful sentence.

Study area: This section moves to the "Materials and Methods" section.

Objective: Merge with the last paragraph of the "Introduction" section.

Materials and Methods

Rearrange this part accordingly.

Study area:

Murshidabad district, the northernmost district of the presidency division, is located in the middle portion of West Bengal, lying between 23°43'30" and 24°50'20" North latitudes and 87°49'17" and 88°46'00" East longitudes (Figure 1). According to the 2011 census, 71,03,807 people live in the district, spreading over an area of 5324 sq. km. It contributes 7.78 per cent of the total population of West Bengal and shares approximately 6 per cent of the state. The district is divided into two physiographic divisions: the western part reveals rugged terrain, locally known as Rarh, and a flat and rolling plain on the eastern side, known as Bagri. The 2015-16 Agriculture Census shows that the district has a total of 433507 hectares of net sown area. The same census reveals that 82.03 per cent and 14.77 per cent of the district's total farmers belong to marginal (less than 1 ha) and small (1-2 ha) land classes, respectively. Similarly, the semi-medium farmers (2-4 ha) account for 3.10 per cent, the medium farmers (4-10 ha) 0.09 per cent, and the large farmers (more than 10 ha) are only 0.01 per cent of the total farmers.

Data source:

This research work is entirely based on secondary data sources, and the required data have been collected from the Agriculture Census of India.

Analytical techniques:

Several methods measure the intensity of crop diversification, such as the Gibbs-Martin Index, Herfindahl Index, Transformed Herfindahl Index, Simpson Diversification Index, Entropy Index, Modified Entropy Index, Composite Entropy Index, Ogive Index, and others. Gibbs and Martin's (1962) technique is employed to assess the crop diversification index in the present study because it considers the percentage of the areal extent of all the crops out of the total cropped area. The index is computed as follows:

$$\text{Crop Diversification Index} = 1 - \frac{\sum X^2}{(\sum X)} \dots\dots\dots(i)$$

Here, X is the percentage of the total cropped area occupied by an individual crop at a point of time. The index value of this technique ranges from 0 to 1. The crop diversification seems to be higher when the index value approaches 1, while the value reaching near 0 reflects a specialization of crop cultivation.

Results and Discussion:

Here, the authors presented only results. They should discuss the results based on other research findings. So, consider the issue.

Conclusion:

I think that is enough.

