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12/02/2024

Review of PhD dissertation

**“Exploring the nexus: Climate change, food security and migration dynamics among  
 smallholder farmers in Nepal”**

submitted by **Ing. Giri Prasad Kandel, MSc.**

In his thesis, Mr. Giri Prasad Kandel assessed the nexus between climate change, food security, and migration in three case-study regions in Nepal. In doing so, he conducted a quantitative survey to collect data from 400 smallholder farmers in three agroecological zones of Nepal. He analyzed the collected data using different econometric models. This dissertation presents interesting findings on the limited capacity of marginalized groups to adapt to the impacts of climate change in agriculture to ensure food security. Rural out-migration as an adaptation strategy has a dual effect on food security, i.e., increased food purchasing power due to remittances and decreased food production due to reduced labor. The dissertation is seven chapters, following a logical and clear narrative. It comprises two published papers in journals indexed in the Web of Science.

The first three chapters of the dissertation provide a general background of the study. They are Introduction, Literature Review, Aim of the thesis, and Methodology. The “Introduction” clearly presents the motivation for the dissertation. Mainly, it highlights ongoing climate change, its impacts on food security and smallholder farmers, a need for climate change adaptation, and the food security and climate change situation in Nepal. It also provides an overview of the dissertation. This chapter could further highlight the research gaps this thesis aimed to fill.

Mr. Kandel conducted the “Literature Review” to develop a conceptual framework for this dissertation. This chapter brings and motivates various components of the conceptual framework. However, this chapter comprises some details and sections that are not closely related or reflected later in the dissertation, e.g., Figure 1 and Section 2.1.5. This chapter could be focused and condensed on the literature review needed to motivate, justify, and develop the conceptual framework.

In the chapter “Aim of the thesis”, Mr. Kandel highlighted the research objectives of his dissertation. He also linked these objectives to the sub-chapters of “Empirical analysis, results, and discussion”. The linkages between the sub-chapters could have been further highlighted in this chapter. Further, the formulation of the research objectives needs to be strengthened in terms of sentence structure. The chapter “Methodology” is well-written.

Mr. Kandel included the main findings of his research in the chapter “Empirical analysis, results, and discussion”. It consists of three sub-chapters with two published papers and one manuscript almost ready to be submitted. For clarity, this chapter could be called “Empirical analysis and results”. The manuscript which has not been submitted for publication could be polished further. Mainly, the introduction section could further highlight the research gaps. To clearly present the research findings, the result and discussion sections could be separated. The discussion section could highlight the novelties of the study, compare them with the existing studies, mention the limitations, and explain the policy implications.

Chapter six is titled “General Discussion, Objectives Review, and Study Limitation”. This title could be changed to “General Discussion”. In this chapter, Mr. Kandel started with a general discussion, highlighted how his dissertation addressed the research objectives, and mentioned the study's limitations. The first two sections of this chapter could be merged to highlight how this dissertation addressed its primary and specific objectives. At least, repetition between two sections needed to be avoided. One section could focus on the primary objective and another on specific objectives. This chapter could also include the section on policy implications mentioned in Chapter 7. In Chapter 7, Mr. Kandel provided a general conclusion of his dissertation and summarized policy implications. The title of this chapter could be shortened to “General Conclusion”.

Reading the dissertation, I would suggest posing the following two questions to Mr. Kandel. Based on your dissertation, explain three key interventions to make Nepal's food system climate resilient. What would you do differently if you redo this study?

In the final evaluation, I find the dissertation interesting, which attempts to decipher the nexus between climate change, food security, and migration in Nepal. The study is well-motivated. The dissertation is well-written, which could be polished by addressing the comments mentioned above. In my view, Mr. Kandel has demonstrated his ability and qualification for being an independent researcher. I conclude that Mr. Giri Prasad Kandel's dissertation meets the PhD requirements. I recommend his dissertation for defense.

Best regards,



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