

Thesis: Climate Change Adaptation in Agriculture: The Case of Nepal, Czech Republic, and Nigeria

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The thesis deals with an interesting and up-to-date topic when assessing climate change adaptation in agriculture on the examples of Nepal, Czech Republic and Nigeria. In particular, the objective of the thesis is to identify the current degree of climate change adaptation in agriculture by looking at several agricultural systems in different parts of the world. The author aims to address the following research question to fill identified knowledge gaps: How do agricultural systems in different parts of the world adapt to climate change, and which key factors influence the degree of adaptation readiness among farmers. This generally defined research questions is followed by three specific research questions: RQ1: which common strategies do farmers adopt to adapt to climate change?; RQ2: how do information availability and the institutional environment influence climate change awareness, knowledge, and adaptation in agriculture?; RQ3: Do socio-demographic and farm-level characteristics affect climate change adaptation and knowledge among farmers under different climatic conditions? The aim as well as research questions are well formulated and justified. Moreover, they do not miss empirical soundness. In addition, the contribution to the literature is justified in introductory part of the thesis as well as by three case studies in the form of research articles.

The dissertation is a type of cumulative dissertation and summarizes and discusses three case studies that are in the form of research papers. In particular, the first and the third case study were published in research journals (Environmental Science & Policy; Climate) and the second case study is currently under the review. The quality of the journals, especially in the case of Environmental Science & Policy journal, incl. high standard of the journals' reviewing process, is a proof of high research standard of the articles, and their empirical soundness.

In general, the structure of the thesis meets the requirements of such type of the study. The thesis consists of ten sections including References, Author's scientific contributions, Conference contributions and projects and Appendices with questionnaires. The first chapter provides a brief introduction into the study topic. It consists of overall background and theoretical background, research objectives and abstracts of the case studies. The theoretical background provides good overview of the studied topic as well as identified research gaps. This being said, I would expect more details on climate-smart agriculture and diffusion of innovations. Moreover, the research gaps are well described but not discussed in expected detail.

The second, third and fourth chapter present the case studies which are followed by discussion and conclusions. The discussion and concluding section provide very well description of key insights and contribution to the literature as well as policy implications and suggestions for future research.

References contain considerable number of studies that do not miss timeliness, relevance as well as international dimension.

Author's scientific contribution present published/reviewed articles. However, I miss the author declaration about his contribution in the articles.

Finally, I have several specific comments/questions to the published/reviewed articles:

- (i) Article 1: Table 1 shows that the first case study uses multiple and binary logit regression. However, in the second section (2.3.3) you present multiple regression model and binary logit model. Can you please clarify?
- (ii) Article 1: Why do not you use marginal effects in the study – see Table 5?
- (iii) Article 2: What are the main interesting results of BLM with respect to research questions and other two case studies?
- (iv) Article 3: Why do you use the same notations in equation (1) and (2)?
- (v) Article 3: Can you justify the use of Double hurdle model to study drivers of climate awareness and knowledge?

In general, the thesis is very well written and provides new empirical findings as well as advances. The author proofed very good theoretical background and skills in empirical analysis.

That is why I believe that Steffen Muench is a good candidate for: “Ph.D.” and I recommend the thesis for the final defence.



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