|  |  |
| --- | --- |
| ID | No of submission |  |
| Title of reviewed paper |  |
| Date of submission |  |
| Date of the 1st revision |  |
| *Date of the 2nd revision* |  |
| *Date of the 3rd revision* |  |

**Author’s Statement**

I have read all reviews vary carefully and have tried to do my best to increase the quality of the paper by including the following changes into my original paper:

|  |
| --- |
| **The changes requested by the reviewer(s), which have been made:**  **(Please provide the brief enumaration of changes you applied in the papper)** |
| Please provide the pint-by point detailed explanaitions to comments of all reviewers and the editor!  Editor:  Reviewer A:  Reviewer B:  Reviewer C:  Reviewer D: |
| **Other changes which have been made and changed the original version of the paper:**  **(Please provide the brief enumaration of changes you applied in the papper)** |
|  |

**SEE THE EXAMPLES BELOW**

(PLEASE DELETE IT WHILE UPLOADIND THIS FILE BACK TO US)

**Response to Reviewer 3 comments**

We are pleased to resubmit the revised version of our manuscript, ‘Climate Vulnerability in Rainfed Farming: Analysis from Indian Watersheds’, for publication with response to the reviewer’s comments. First of all, we would like to thank the reviewer for taking the time and reviewing our paper. We have revised the paper according to the suggestions, which particularly helped to clarify some inaccuracies. As a result, we believe that the quality of the paper has much improved. Please see below our response to the reviewer comments (held in red) and a description of the changes in the manuscript.

Point 1: The paper is interesting in terms of the issue it examines. The literature review adequately stimulates the topic under discussion and clearly shows to the reader the importance of examining the vulnerability of rain-fed production systems. Although the paper is well-founded, it has serious methodological flaws, which reduce its scientific quality and merit. The calculation of the index is based on the algebraic manipulations. There is no statistical background whatso ever, which reduces the importance of the findings only to the level of the farms sampled.

Response 1: In this paper, we developed a composite index to assess climate change vulnerability of rain fed smallholder farmers. There exists a broad variety of indices developed for assessing the vulnerability of different communities, context or social systems [1–5]. We modified and adapted these well-established approaches and made necessary modifications in the existing indices according to the local situation, guidelines of Watershed Development Programmes (WDPs) and rain fed smallholder characteristics. In this regard, we do not understand why the established and widely accepted way of calculating an index is seen to be “based on algebreaic manipulations”. Our findings are based on smallholder farm families who have participated in WDPs under three different implementing agencies. Thus, our approach is based on a randomly selected sample which allows us to draw conclusions about the underlying population parameters on an aggregated level. Similar reasonings for our approach can be found in [1–3,6,7]. As such, we strongly feel that our approach is not only relevant for the local communities under considerations but in a much broader sense, with emphasis on WDP as a disaster management tool.

Point 2: The choice of the variables (items) to formulate the latent variables and the overall index is justified (although Table 1 and Table A1 in the Appendix could be merged) but the validity of the construct is not justified. So, it is not only the findings that are of low usability, but also the overall latent construct (index) is not tested, so it is doubtful whether it could be used in other settings. There are plenty of methods which could be used to overcome these issues such as the well-founded and widely used Confirmatory and Explanatory factor analysis, the calculation of a-Cronbach indices and/or other, more sophisticated statistical frameworks. 2

Response 2: The construction and development of our indicators is very similar to other established methods. Extensive publications on this subject are available [1,3,8–12]. The correlation analysis we have undertaken in Lines 222-232 is based on all the answers given by the households and is used in order to show and avoid the introduction of double counting into the index. However, the 59 explanatory variables we used for the computation of the index are defined in such a way, that they result in one single value per variable (e.g. percentage of families with debt, percentage of cultivated land area etc.). Therefore, using an explanatory factor analysis is not feasible in our situation as we cannot compute a variance for these explanatory variables nor can we compute a correlation between them. Although we share your concern that one of the most difficult aspects of creating a multidimensional index is choosing weights for the components, using an equal weighted aggregation to construct a composite index is not uncommon in praxis [8–11]. Hence, we are convinced that our proposed index and the way we estimated is appropriate, similar to other published index based approaches of vulnerability assessment. We agree with the reviewer in the organization of the tables. We shifted part of Table 1 to the Appendix to simplify the text and to avoid lengthy explanations. However, we kept both tables, as Table A1 contains valuable additional information for the interested reader to understand the relationship of the selected indicators to measure vulnerability, how the indicators are derived, and how they are used in the composite index.

Point 3: The use of English is overall acceptable, but there are several parts that need to be reviewed, especially in terms of grammar. Some minor changes should be made to the references within the text

Response 3: Thank you for the comments. We have made necessary changes to the manuscript and particularly checked the references.

**Responses to Reviewers’ comments from Round 1**

Dear Reviewers,

Thank you so much for your constructive and valuable comments, which were very useful for

us. We did our best to include all your suggestions and we are pretty sure that all your

comments, tips and clues allowed to increase the quality of the manuscript. Below we will

respond to all your detailed comments made in your reviews:

**Reviewer 1**: 01 Nov 2018 17:03:24

1) the submission lacks research questions and hypotheses, sections that are essential in

submissions, based on their qualitative or quantitative approach.

RESPONSE: As suggested we added research questions RQ1-RQ4 (see lines 64-72).

There are also 4 hypotheses retrieved from the literature (see lines 194-195, 289-290, 325-

327, and we left the one we had in lines 404-406). In the methodology section we added

the information that we used the quantitative design (see lines 410-413). Thank you for

your suggestion.

2) Theoretical Framework is far too general. The connections between Entrepreneurship,

Knowledge and Internationalization. However is not developed in the Literature Review

section of the paper. What is the state of the art in the existing literature? What research

gaps exist?

RESPONSE: We extended the literature Review and included all suggested by you fields

(see lines 41-48, 53-56, 282-288) and we tried to show the research gap (see lines 76-83

and 395-403). We show also the merged problem as the research gap (the whole current

point 2.3 from lines 390-406) which is the resultant of separate two issues namely

entrepreneurial orientation (the whole current point 2.1, lines 101-195) and knowledge

utilization (the whole current point 2.2, lines 197-327). We hope it is visible now in the

improved version of the manuscript. Thank you for your comment.

3) The method used to achieve results is far too general, lacking the necessary scientific

rigor.

RESPONSE: Now we added also multiple regression, not only the *t* test in order to

increase the scientific level of reasoning. We also used validity tests (Cronbach’s alpha)

to provide scientific rigor. Thank you for your suggestions.

4) There are many spelling errors in the manuscript. In addition, the writing style does not

fit the requirements of a journal like Sustainability. I strongly recommend the author(s) to

seek help from a professional proof-reader.

RESPONSE: We have the manuscript proofread by a public professional (a native

speaker). We are so sorry for your inconveniences.

Once more thank you so much for your valuable comments, now we can see that our article is

completely different, much better thanks to your suggestions and inspirations.

Sincerely yours, Authors