

Review Results for the paper titled “Determinants of farmers’ tree planting investment decision as a degraded landscape management strategy in the central highlands of Ethiopia” (Ms NO Se-2015-99)

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Overall, the theme appears interesting. Vegetative measures are cited effective by most scholars to manage landscape degradation caused by soil erosion, mass wasting, and landslides. Plants provide cover and protection to soils and rocks and even their roots have the capacity of binding soil aggregates together. Hence, this paper provides meaningful contributions to the scientific community about tree planting as a strategy of degraded landscape management and restoration. However, some significant queries need be clarified, or else revised, before publication. Major changes recommended include the following:

- 1- **Linking the discussion section (part 3) with the specific objectives is required: e.g.:**
Specific objective i) pp.3248, line 8-12 asserts to examine tree planting decisions of land users to reverse land degradation caused due to deforestation, gully formation and soil erosion. However, there are no evidences on the results part how deforested and gullied areas are managed or covered with trees. This indicates that the study is lacking significant focus on the specific objectives raised. The separate specific objectives should be better analyzed and be provided with temporary conclusions.
- 2- **Linking the concluding remarks with the points discussed in the results part is needed: e.g.:**
 - In the abstract, p3246, lines 17-19, “the processes of land use conversion and land degradation are serious which in turn have had adverse effects on agricultural productivity, local food security and poverty trap nexus”. But here, is “land use conversion” mean “land degradation”? If not, your focus is I think on “land degradation” and there is no need to include “land use conversion”. Again the sentences lines 19-21, read as “...devising sustainable and integrated land management policy options and implementing them would enhance ecological restoration and livelihood sustainability in the study watershed”. But, the phrases “sustainable and integrated land management policy options” and “ecological restoration and livelihood sustainability” are not adequately analyzed in the results section. So, on what background you reached at such a conclusion?
 - P 3261, Section 4, lines 16-18 states: “The result of the study revealed that the challenges for sustaining the current land resources utilisation are immense in the study watershed”. But, there are data supporting this suggestion. So, how did you come to such a conclusion?
 - Lines 21-26, the likelihood of household size, productive labour force availability; disparity of schooling age, perception of the process of deforestation and the current land tenure system have positively and significantly constrain on tree growing investment decision to combat land degradation, minimize soil fertility exhaustion and ecosystem disruption as well as to scale up ecological sustainability. The concepts “minimize soil fertility exhaustion and ecosystem disruption as well as to scale up ecological sustainability” have no supporting evidence in the analysis part (section 3) and are not directly related to the problem considered. The conclusion on pp, 3261-3262, lines 27-28; “integrated land

resource management strategy option is essential” has no any supporting analysis in the results.

3. Specific comments:

- P.3250, 2nd paragraph, first line “LULC” should be defined at the first start. Again, (CSA) (2010), line 12 should better be written as (CSA, 2010).
- The sentence on the last paragraph (same page) line 18-24 is too long and needs rewriting. On line 20, “Rural Kebele Associations” contradicts with what is given in fig. 1, p. 3270. Change it to Rural Kebele Administrations.
- On p3251, line 8-9 & 13-15 indicated that “A social survey instrument” and SPSS were used in data analysis. What is “A social survey instrument”? SPSS is a supporting tool and not a model. Hence, it is better to write the name of the regression model used in data analysis.
- P3252, last paragraph, line 20 is it that to say logit values?
- P3253, last paragraph, last three lines, how was multicollinearity assessed? Can you specify the method used?
- The 2nd paragraph, p3254 should better move to p3251 (i.e. to the methods part).
- Can you relate the descriptive results discussed (pp.3255-3256) like family size, farm size, etc with other similar works so that readers can evaluate the accuracy of the data?
- Source is missing for information provided in the 3rd paragraph (line 15-26), p.3256.
- P.3257, 2nd paragraph, first line, there is the term “willingness”. Now a question arises that what was studied, “willingness” or actual adoption behavior? See the last sentence of this paragraph, is it relevant?
- P.3260, 2nd paragraph, line 19-21, states that the current land ownership policy discourages farmers’ participation in tree growing activities. Is this explanation correct given the regression result (Table 4, LATENURE) remains positive?
- In the summary statement pp.3261-3262, under the concluding remarks (line 23-24), is the expression “**have positively and significantly constrain** on tree growing investment decision to combat land degradation, minimize soil fertility exhaustion and ecosystem disruption as well as to scale up ecological sustainability” correct? Particularly see the term “**positively and significantly constrain**”. I think this requires revision. Please try to improve these conclusions based on empirical data. Besides, soil “fertility exhaustion”, “ecosystem disruption” and “ecological sustainability” are not mentioned in the results part. So, based what data you reached at such a conclusion?
- P.3266, Table 1, how the households were selected from the three catchments? Was it based on proportion?
- P.3268 (Table 3), Data are provided for the three RKAs but not discussed in the text. So, what is the use of showing such data if not discussed in the text?
- P.3269 (Table 4), why training and road access came-out with negative signs?

Finally, I suggest the publication of this paper after addressing the above mentioned minor comments.

With kind regards