Reviewer’s report

Title: Proximate determinants of fertility in Ethiopia; an application of revised Bongaarts model

Version: 0 Date: 13 Dec 2018

Reviewer: Mezgebu Yitayal

Reviewer's report:

General Comments: This paper has tried to generate evidences on the role proximal determinants on fertility which is vital for developing strategies to manage the population growth. However, the authors did not describe whether the analysis is descriptive type or inferential analysis. Using formula to calculate may not make the analysis inferential. The term determinants suggest the authors shall use inferential analysis in which they show the background variables on fertility through the proximal determinants.

Abstract

Background: The background section of the abstract shall describe the study gap and the justification of the study in brief.

Method: The method section shall describe the inclusion and exclusion criteria, and the specific data analysis methods. It is also better to justify why the authors preferred to use only the four variables: region of residence, educational status, wealth index and place of residence.

Result: The result of the study/analysis should also be reported in light of the selected variables. For example, what was the relationship between the selected variables for analysis and the outcome variable i.e. fertility. The authors shall also interpret the association between variables.

Conclusion: The conclusion shall be written/ concluded based on the findings of the study. It is not repeating the result which is described in the result section. It is better to say the contribution of determinants is high or medium or low.

Keywords: Please use specific terms of background variables.

Background: The background section lacks synthesis of evidences.
It simply reports the evidences independently. As background includes review of literature, the authors are expected to search for sufficient evidences most importantly recent ones; and comprehend and synthesize the evidences.

The authors also need to describe the role of background variables on influencing the proximal determinants, and there by their influence on fertility.

Page 4 (Paragraph 3, line 24): It is worth mentioning why the revised version of Bongaart's model in use.

Page 6 (Paragraph 7, line 8)... the author described that "An estimated 620, 300 induced abortions were performed in Ethiopia in 2010". Why did not you use recent figure? It is almost more than 8 years and things might have changed since 2010.

Methods: The method section well describes the formula/model to estimate proximal determinants. However it does not describe the details of analysis. For example, the authors did not explain how they estimated the effect of proximal determinants on fertility, and how they interpret the findings.

The authors also should state the assumptions used and the ways to treat confounders. Because the background information/variables, and proximal determinants could also be affected by other unobserved/unmeasured variables i.e., omitted variables which could bias the result.

Results:

Page 11 (Paragraph 1, line 20): It is better to describe the value for biological maximum.
Page 12 (line 10): The analysis should be described in the method section in detail.
Page 13 (line 8): The question is how you determined the index of marriage was high or low based on the background variables. This should be described in the method section.

Discussion

The discussion should address the background variables as well as the proximal determinants of fertility, and the fertility level itself. The discussion has not been well written.

The authors shall discuss their findings in light of previous theoretical and empirical evidences, especially focusing on background variables and proximal determinants. They shall cite references in comparing and contrasting their findings with other findings.
Level of interest
Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

Quality of written English
Please indicate the quality of language in the manuscript:

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