January 20, 2018

Dear Professor Hannum,

I have now received reports from three reviewers regarding your manuscript, "Replication to assess statistical adequacy," (*Manuscript Number 2375; Discussion Paper Number 2017-73*).

Based on the feedback I have received, I am inviting you to submit a revision. Your revision should address the individual points raised by each of the reviewers. In addition, you should include a separate document that provides a point-by-point response to each of the reviewer's comments. You are not required to do everything the reviewers say, but if you disagree with a recommendation, you should state your reason. A successful revision will include addressing the following:

1) As noted by several reviewers, your replication plan is too vague. For example, your discussion on the bottom of page 4 and top of page 5 poses a number of questions. Rather than raising questions, rewrite your replication plan so you describe how you plan to answer these questions.

2) Several reviewers also noted that it was unclear what specifically you mean by "replication." Reviewer 3 (Haig) makes a distinction between "direct replication" and "conceptual replication." You cite Clemens (2017) and Morrison et al. (2010) as providing classification systems. I am partial to the replication types discussed in Reed (2017) (Reed, W.R., 2017, Replication in labor economics, *IZA World of Labor*, 2017:413, doi: 10.15185/izawol.413). It would be helpful if you made an attempt to map your understanding of "replication" to one of these taxonomies, recognizing that your replication plan may include multiple types of replications carried out in separate stages. The reason this is important is because interpretation of your results depends on the replication type. If one is carrying out a push-button reproduction using the original author's data and code, then any deviations from the original study are "failures." Alternatively, if one finds that different data and/or procedures produce different results, interpretation becomes more complex, and may involve consideration of external as well as internal validity. But it all begins with a clear understanding of what you mean by "replication."

3) Lastly, several reviewers also challenged you to be more explicit about how you define "replication success." Reviewer 3 (Haig) discourages you from using p-values in your measure of success. Whatever you finally decide, you need to be clearer about the criteria envisioned by your replication plan. Presumably, replication "success" would focus on the estimated *Facebook* coefficient. Would you focus on the size of the coefficient, or its statistical significance? Suppose the effect was numerically small, much smaller than estimated by Jha and Sarangi (2017), but still statistically significant. Would that constitute a replication "success?" Or not? You need to elaborate on this important point.

A revision that satisfactorily addresses the points above, as well as responding to the individual reviewers' concerns, is likely to result in a favourable publication decision.

Thank you for submitting your manuscript to *Economics: The Open-Access, Open-Assessment E-Journal.* I look forward to receiving your revision.

Sincerely,

W. Robert Reed
Co-Editor, *Economics E-Journal*