Report on

W. Robert Reed, Raymond J.G.M. Florax, and Jacques Poot (2015). A Monte Carlo Analysis of Alternative Meta-Analysis Estimators in the Presence of Publication Bias. Economics Discussion Papers, No 2015-9, Kiel Institute for the World Economy. http://www.economics-ejournal.org/economics/discussionpapers/2015-9

This paper is an important contribution to the literature. Using Monte Carlo simulation it analyses the comparative strengths and weaknesses of standard meta-analytical procedures to deal with bias against statistically insignificant and wrongly signed estimates. The authors label this as publication bias, but I am not convinced that they cover all aspects of bias, or of publication bias specifically. In particular bias may occur due to intrinsic motivation and bias of the researcher (see, e.g., Doucouliagos and Paldam 2009 on development aid) and this is quite different from for example an elasticity where a priori the sign is known. So the bias studied in this paper is more limited and that needs acknowledgement somewhere in the paper (for example, p. 3 line 4)

The authors are not consistent in their treatment of 'wrong studies' in the first part of the paper the probability of such studies being published is set at 10% (without further motivation). In a latter part of the paper it is set a 0% (p.22 also without motivation).

I am not convinced by the argument of the paper against the use of meta-analysis as a way to test hypotheses. It is quite counterintuitive that the meta-analyses can come up with a reliable point estimate but have such large failure rates when it is about the actual sign of that point estimate and the authors do not provide a convincing explanation. To me this looks like an error of reasoning. An insignificant positive coefficient is logically not different from (in) significant negative coefficients when the a priori expectation is that the coefficient is significantly positive, but these are indeed treated differently by the authors and this distorts their numbers. Moreover, all that the paper does is analyze this for a subset of methodologies ignoring for example 'more truly' hypotheses testing meta analyses such as Lazaronni and van Bergeijk (2014). The authors should be explicit what they have analyzed and what not and this issue of hypothesis testing is something that needs to be suggested as an area of further research

p. 21 it strikes me as very odd that a 55 per cent improvement is labelled as a qualitatively unaffected result.

This being said the extensive simulations are valuable and have the merit of showing sensitivities and relative performance of methods that so far have been neglected in the literature.

Doucouliagos, H., and M. Paldam. (2009) "The aid effectiveness literature: The sad results of 40 years of research." Journal of Economic Surveys.
Lazaronni, S. and P.A.G. van Bergeijk, (2014) Natural disasters impact, factors of resilience and development: a meta-analysis of the macroeconomic literature, Ecological Economics

Details
• Why does the abstract contain acronyms
• The last sentence of the abstract is awkward. The paper makes important contributions (listed on p.26); rearrange the abstract to flesh out these contributions and add "We set out a practical four step procedure that should be followed in meta-analysis."

• The authors have a tendency to put important arguments in footnotes. Footnote 1, footnote 2 and 7 are clear examples of what needs to be in the main text. In a sense footnote 2 is relevant for the conclusions section as well
• P.2 the claim that previous studies that focus on publication bias assume that studies only produces one estimate needs references
• The authors (e.g. p. 9 refer to full percentages in the text) but percentages wt one extra decimal in the tables. Better to do this the same.
• In the same vein on p. 16 numbers rather than percentages are given
• P.9 l.12. I would like to know the exact numbers/percentages for each of the two populations
• In the funnel plots it would be helpful to report the number of dots in the title of the plot (N=…)
• P 15 final but on line “to” generate
• P. 17 line 3 An
• P. 19 I would have liked to figures 4 and 5 at the beginning of the article. This is research reality. It provides the pictures that the article wants to simulate.
• In order to reach a broader audience it would be helpful to provide clearer intuition regarding the different modelling strategies (explain better why the equations differ. In 3’.B you add 0.3. Help the reader to understand why this is sensible.
• It would be good to have an overview table with the major conclusions (somewhere around page 25)
• P. 25 one but last line misses a “one”