

Interactive comment on “Evaluating the effectiveness of flood damage mitigation measures by the application of Propensity Score Matching” by P. Hudson et al.

Anonymous Referee #1

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This paper tries to better estimate the effectiveness of private flood risk reduction measures, based on survey data from two German catchments. To improve the estimation, the bias coming from hazard, exposure and vulnerability variables in the sample is removed, applying the Propensity Score Matching (PSM) approach.

This is very good paper and an important contribution to research on flood risk management. By applying the bias correction it significantly improves the estimation of the effectiveness of (private) risk mitigation measures. The paper is furthermore well structured and written. I am not an expert in the PSM approach so it might be good if section 2 is also reviewed by someone who is more familiar with this approach. However, to me

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it seems that the approach is well justified, very good described and correctly applied.

I would therefore recommend to accept this paper for publication after some minor revisions. Please find my remarks directly in the PDF-file.

Only one major point: Having read the discussion and conclusion section (which includes not only conclusions on the effectiveness of measures but also methodological recommendations on the application of PSM), I would recommend to introduce two sub-objectives, e.g. 1) providing conclusions on the effectiveness of DMM 2) providing conclusions on the application of the PSM approach.

This could be also used to structure the discussion as well as conclusion section a little bit more, i.e. 5.1 discussion of the results (re effectiveness of measures) 5.2 discussion of the method 6.1 conclusions re effectiveness of measures 6.2 conclusions (or recommendations) re application of the method.

Please also note the supplement to this comment:

<http://www.nat-hazards-earth-syst-sci-discuss.net/2/C109/2014/nhessd-2-C109-2014-supplement.pdf>

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