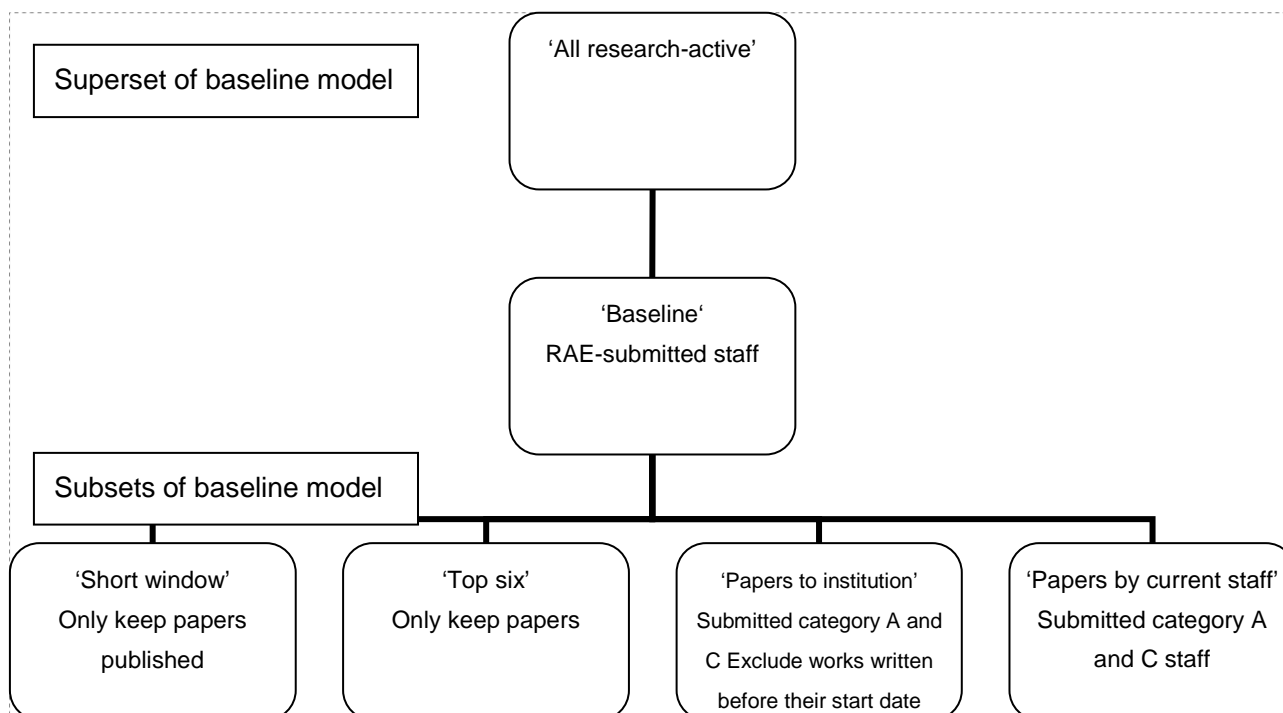


## Annex D: Other variants of staff-based models

1. We looked at a range of author-based models. Work using some of the author metadata is ongoing; for example, we plan to look at equalities and early career researcher issues using the data in the staff table. The models we looked at are illustrated in Figure D1.

**Figure D1 Models analysed in the bibliometrics pilot**



2. In model 2, based on authors, all papers, we limited the staff included to RAE-submitted staff, and the outputs linked to them. We also looked at a wider cohort of staff, by additionally including outputs linked to RAE-eligible, but not submitted, members of staff. We are aware that institutions interpreted the 'RAE-eligible' field differently, which limits the comparability of this model between institutions.

3. In practice, we generally found that the all research-active staff model made little difference to the outcomes, compared with the baseline model. We suspect this is because, provided a department had taken a reasonably inclusive approach to its RAE submission (say, including most of its research groups), most outputs would be linked to a submitted member of staff anyway. As described above, we allow each output to be included at most once per submission, so the additional 'link' to an eligible, but not submitted, individual will have no effect.

4. We also looked at a number of models that took a subset of the baseline model data. These included a short time window model. In this, we simply removed outputs that did not have a publication year between 2004 and 2006. Given the current timescale of the REF and the resulting limited utility of this model, we do not analyse it further in this report. Evidence has looked at the effect of different time windows; further details are in Annex I.

5. We also constructed a model where we attempted to link papers to the institution in which they were written, rather than the person who wrote them. We did this by limiting our staff cohort to category A and C staff, and excluding papers that were written before any of the authors linked to the institution had joined it. We are aware that the data on staff leaving dates is of variable quality between institutions, and that this limits the comparability of this model between institutions. In practice, the outcomes of this model were, in general, very similar to the baseline model.

6. We also constructed a model where we limited the outputs included to those linked to current (that is, category A and C) members of staff. Again, the outcomes in this model were, in general, very similar to the baseline model.

### **Outcomes for sub-variant models**

7. We also looked at some variant models from the baseline model, discussed above. Comparability between institutions for these models was hampered by the varying degrees with which institutions were able to return the data required to produce them. This is discussed more fully in Evidence's data collection report<sup>1</sup>.

8. In most cases, the outcomes produced by these models were similar to those of the corresponding submitted staff model. We therefore present these results in summary form.

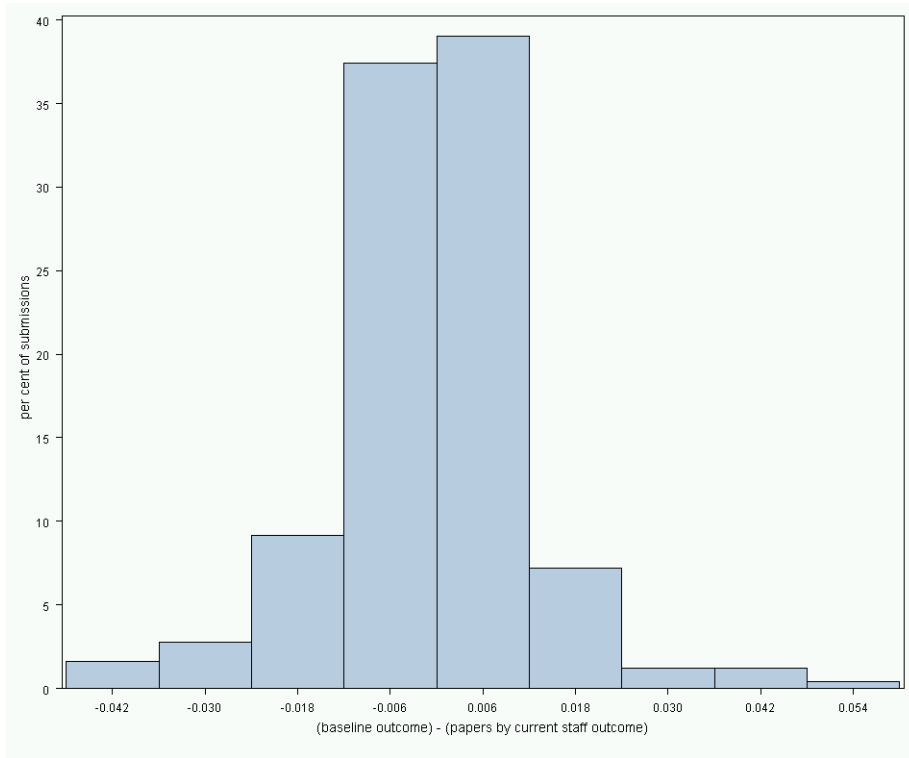
9. In the accompanying graphs D2 to D7 we show, for each pilot UOA, how the number of outputs included in the 'all eligible staff', 'current staff', and 'papers at institution' varies when compared to the submitted staff model for the submission. We only include submissions with at least 50 papers included in the baseline model in these figures.

10. We also show the effect that this has on the outcomes, if we look at our two principal indicators. We do this by comparing the outcome for the submitted staff model and the variant model we are looking at, for each indicator. We plot the difference in indicator value for each submission. As can be seen from graphs D2 to D7, in most cases there is little difference between the baseline and variant model outcomes.

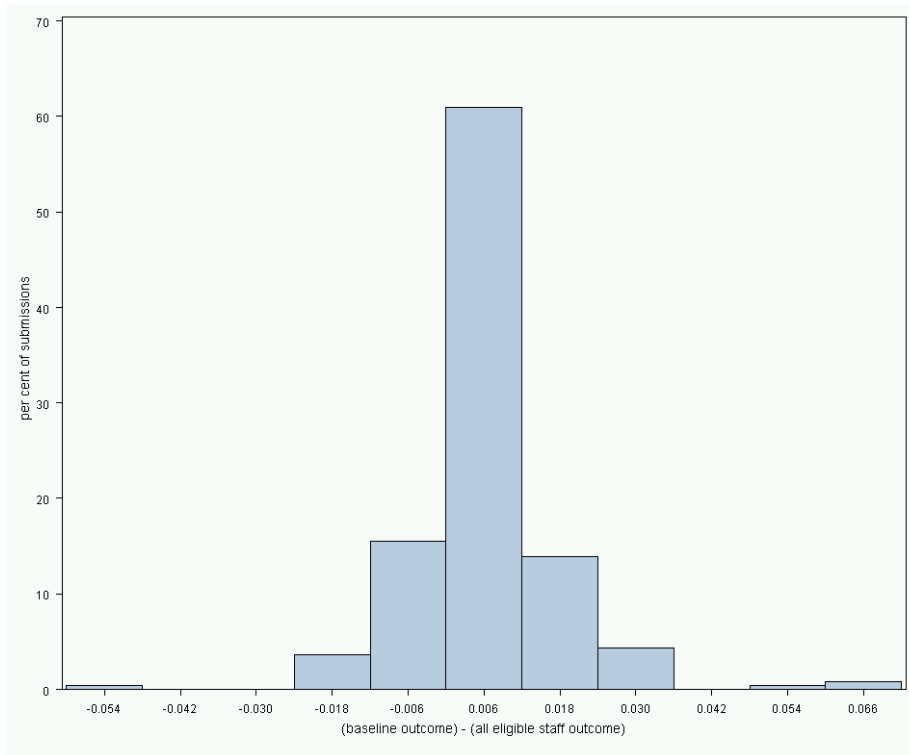
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<sup>1</sup> 'Pilot study of bibliometric indicators of research quality: Development of a bibliographic database. A report to UK HE funding bodies by Evidence Ltd' (July 2009). Available at [www.hefce.ac.uk](http://www.hefce.ac.uk) under Publications/Research & evaluation.

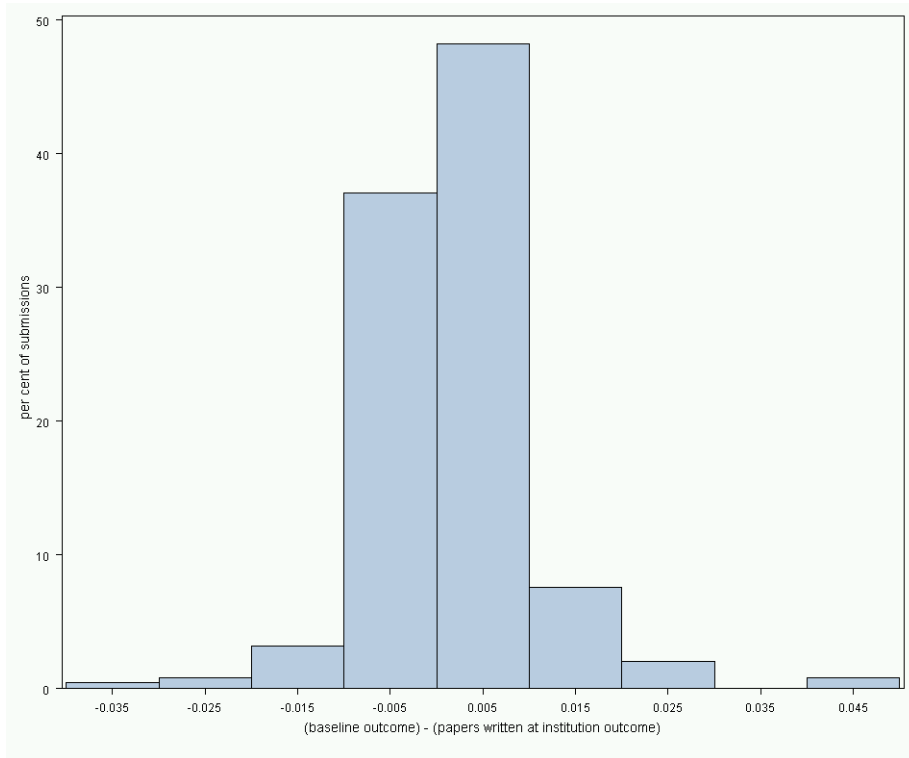
**Figure D2 Change in percentage greater than twice world average outcome for baseline against all current staff model**



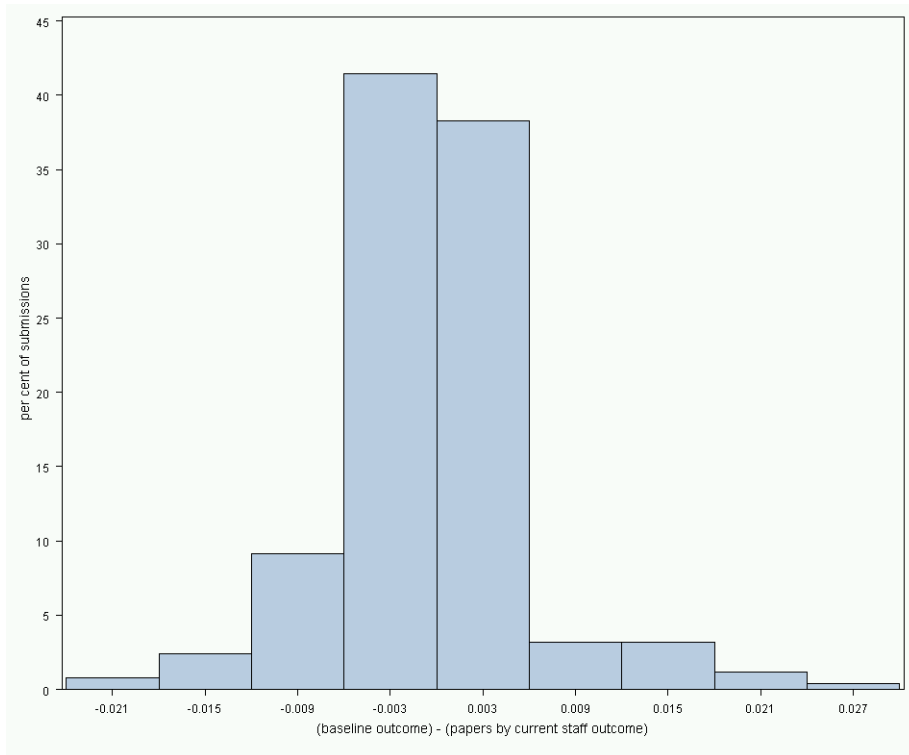
**Figure D3 Change in percentage greater than twice world average outcome for baseline against all eligible staff model**



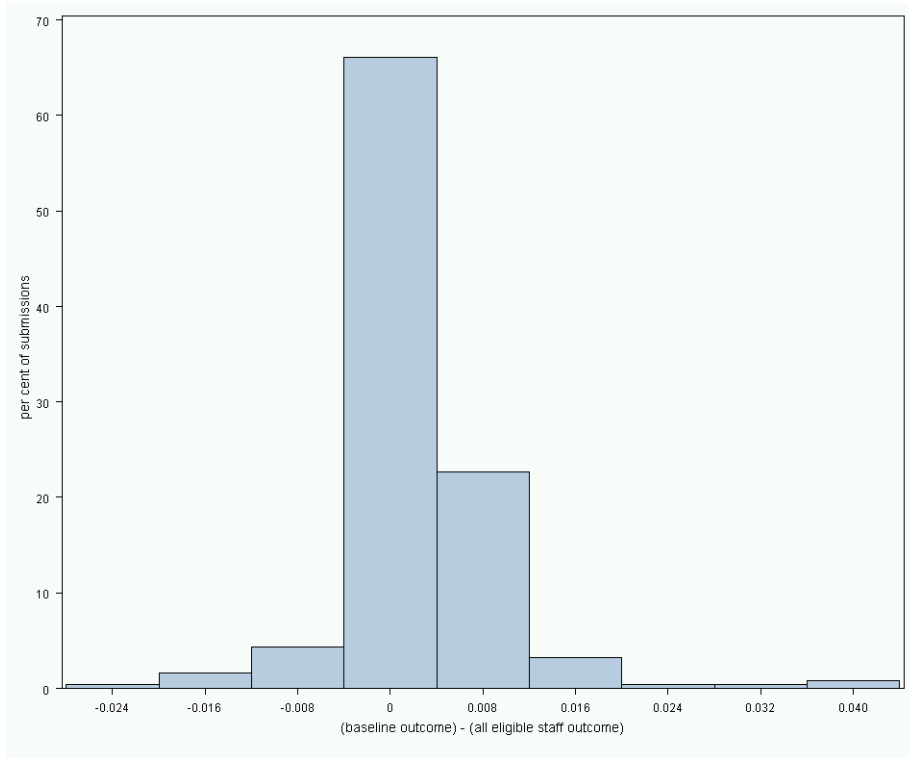
**Figure D4 Change in percentage greater than twice world average outcome for baseline against papers written at institution model**



**Figure D5 Change in percentage greater than four times world average outcome for baseline against all current staff model**



**Figure D6 Change in percentage greater than four times world average outcome for baseline against all eligible staff model**



**Figure D7 Change in percentage greater than four times world average outcome for baseline against papers written at institution model**

