

## Commentary

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# Comments on the paper “Helping reviewers ask the right questions: The InfoQ framework for reviewing applied research” by Ron S. Kenett and Galit Shmueli<sup>1</sup>

Gemma Van Halderen\*

*Strategic Partnerships and Projects Division, Australian Bureau of Statistics*

*Tel.: +61 2 6252 6977; Mobile: +61 408 978 697; E-mail: g.vanhalderen@abs.gov.au*

*Helping Reviewers Ask the Right Questions* [1] articulates an important issue reviewers are faced with when asked to peer review a paper for publication: how to review it and what are the review criteria. I felt the paper tackled well the motivation and drivers as to why a framework for asking the right questions during a publication review process would be useful, and clearly identified the problem in providing no or very limited guidance to reviewers.

The author puts forward a review framework known as InfoQ. Not being familiar with this framework, I found the description of its eight dimensions informative. However, whilst its applicability to a publication review process is a novel idea, I feel it needs further consideration and thought before being a useful tool for reviewers.

To illustrate, the paper itself is free of numeric data. Information is the source of data in this paper. If one was to use the eight InfoQ criteria to review the paper, it is not immediately obvious how the criteria would apply. Take criteria one, data resolution, as an example. The paper describes data resolution as “the measurement scale and aggregation level of data. The measurement scale of the data should be carefully evaluated in terms of its suitability to the stated goal, the analysis methods used, and the required resolution of

the research utility. Questions that a reviewer should ask to figure out the strength of this dimension:

- Is the data scale used aligned with the stated goal?
- How reliable and precise are the measuring devices or data sources?
- Is the data analysis suitable for the data aggregation level?”

The stated goal of the paper is to “propose an approach, based on the Information Quality (InfoQ) framework, for providing guideline scaffolding for the review process of papers submitted for publication in scientific journals”. If the data scale is taken to mean the information contained within the paper, then the paper does appear aligned with its stated goal. In relation to the second question, the references are to a variety of sources including *Nature*, and all appear to be reliable and credible information sources. A more systematic and thorough analysis of each of the references would offer a more definitive answer to the question. In relation to the third question, the approach to data (or in this case information) analysis is to provide an illustrative example for each of the eight criteria. The example for data resolution is “Google’s ability to predict the prevalence of flu on the basis of the type and extent of internet searches.” An example of how the data resolution criteria could be applied in a review process, particularly a review process for a scientific journal, would have been more beneficial.

Where would this paper fall on a rating scale for data resolution? The paper gives no guidance on rating

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<sup>1</sup>R.S. Kenett and G. Shmueli, Helping authors and reviewers ask the right questions: The InfoQ framework for reviewing applied research, *Statistical Journal of the IAOS*, 32 (2016) 11–19.

scales other than to say that “a low rating on data resolution can be indicative of low trust in the usefulness of the study’s findings.”

By their very nature, the rating scale would still be a subjective judgement process based on the reviewer’s individual interpretation and bias towards criteria such as “whether a device or data source is reliable and/or precise”.

The IAOS Young Statistician Prize has a set of criteria which offer another approach for a review process of papers submitted for publication in scientific journals, in this case the Statistical Journal of the International Association of Official Statistics (IAOS).

Applications to the Prize take the form of a paper prepared using the Statistical Journal of the IAOS guidelines. Each paper goes through a two stage process and those which make it through the first phase are reviewed by two reviewers who assign scores against four criteria. The four criteria are scientific and/or

strategic merit (maximum of 40 points); originality (20 points); applicability of the ideas in statistical offices or in the practice of official statistics (20 points); and quality of the exposition (20 points). Each paper is then given an overall score out of 100, and the winners are those with the three highest overall scores. There is no cutoff set by which a paper is not considered suitable for publication, but over time such a cutoff could emerge.

This simple approach appeals to this often time-poor reviewer.

Thanks for opportunity to comment

## Reference

- [1] R.S. Kenett and G. Shmueli, Helping authors and reviewers ask the right questions: The InfoQ framework for reviewing applied research, *Statistical Journal of the IAOS* **32** (2016), 11–19.