

THE NEW RESEARCH AND INNOVATION BILL FROM THE SWEDISH GOVERNMENT – A COMMENT

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Having recently written in this journal about the use of performance indicators for research funding purposes, I would like to briefly comment on the discussion of that topic in the new Research and Innovation Bill from the Swedish Government.

To begin with, it may be useful to state clearly some fundamental principles, even if they are fairly obvious:

1. Any system for allocation of funding that is likely to transfer funds from one area to another will be resisted by some people on the losing end.
2. Any system for allocation of funding that is likely to transfer decision-making powers away from certain groups will be resisted by some people in these groups.

If we apply these simple principles to the allocation of government funding for research, we see that researchers on the losing end of any allocation system are likely to complain, and that individuals who currently influence research funding decisions are likely to be negative as well.

In the above-mentioned [article](#) I showed how the inefficiencies, unintended biases, and high costs associated with funding decisions based on peer review led to the increased use of bibliometric methods as an alternative, beginning in the 1960s. During the last half century bibliometric methods and indicators have become increasingly more precise and robust. Especially the quality and extent of bibliometric data have improved enormously. The 1961 edition of the *Science Citation Index* contained 870 000 cited papers. The *Web of Science* of today contains close to fifty million records, and includes about 150 000 conference titles as well as 40 000 scholarly and scientific books. There are of course also many other comprehensive sources for citations and other types of bibliometric data.

A number of studies all over the world have shown that evaluations based on bibliometric indicators generally yield the same results as extensive assessments based upon qualitative peer review, but at a fraction of the cost.

Furthermore, most of the discrepancies between the qualitative and quantitative methods are believed to be caused by flaws in the former systems rather than vice versa (see e.g. Abramo et al, 2011). Finally it should be noted that even qualitative peer review frequently makes use of various bibliometric indicators (e.g. the *h-index* seems to be particularly popular), but often in a haphazard and imprecise fashion.

There are clearly areas of research where bibliometric indicators are inadequate, because the publication data for these areas are insufficient (too few publications or too few citations), too heterogeneous, or simply not sufficiently developed. Some of these research areas should probably shift the publication patterns towards channels that may be internationally cited, but there are also a few areas where it can sometimes be difficult to publish in any international highly cited channels. We are here referring primarily to subjects with a strong national component. In Sweden there are areas such as the Swedish Language, Swedish History, Swedish Literature and so on, where some works are likely to be of less interest to an international audience. There may also be new or highly complex hybrid research areas where it is very difficult to extract the relevant literature. Thus qualitative methods certainly have their place, but because of the enormous costs and high risks of biases, they should generally be restricted to only the fields where bibliometric indicators are less reliable. (They may of course also sometimes be used to complement, evaluate and calibrate quantitative indicators.)

The suggestion in the government bill that Sweden should decrease the role of bibliometric performance indicators for all research areas in favour of a more qualitative peer review thus clearly represents a step backwards. Hopefully the preliminary investigation by the Swedish Research Council and other bodies, as proposed in the bill, will soon come to the same conclusion.

References

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