

Assessing Research Productivity: Important But Neglected Considerations

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The article by Im, Kim, and Kim entitled "An Assessment of Individual and Institutional Research Productivity in MIS" (*Decision Line*, December/January 1998) reported on an elaborate process to rank individual researchers and (by association) their institutions, in terms of research productivity. The authors started with the noble objective of complementing "the subjective judgment about the leading MIS researchers and institutions," and followed an elaborate process to accomplish that. My intention is not to discredit their work but to set forth some important considerations for endeavors of this type.

To accomplish that, some of their (and similar assessments) assumptions must be questioned so that readers can judge for themselves the value of such rankings and how the process may be changed to make it more accurate, and closer to accomplishing their primary objective to answer (Im, Kim, & Kim, 1998, p. 8):

Who are the top researchers in the MIS area?

Which institutions are most productive...?

What are the degree of contributions that these top individual and institutional researchers make...?

considered to be the best by IS academics. IS is an applied field, however. Shouldn't practitioners' opinions also be considered? Since they are ultimately the consumers of our research, should their opinion not be considered even more important than ours?

Two of the six journals selected for consideration do not follow a double-blind refereeing process, thus the process of getting articles published in these journals is very political and acceptance is not necessarily based on quality of the research or the report. There are many cases of poor quality articles accepted for political or personal reasons, including some cases where the editor went over the objections of the article reviewers.

There are several IS journals, such as *Information & Management*, *OMEGA*, and *EJIS*, which are as respectable as any journal but perhaps not as well known to the general IS academic community. Similarly, IS technology is of interest to academic researchers and practitioners in many other disciplines which have extremely well regarded journals such as the *Journal of Applied Psychology*, *Academy of Management*, *Administrative Science Quarterly*, and many others. Artificially restricting the number of journals in the IS area to six may be necessary to simplify the researchers' work, but it leads to a superficial assessment of research productivity, and it is not conducive to effectively addressing the questions stated as the motivators for the study.

Defining Research Productivity

The authors define research productivity in three different ways, none of which can possibly account for the highly desirable practice of developing new researchers,

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Two Basic Assumptions Are Questionable

To simplify their work, the authors were forced to make two basic assumptions that have a profound impact on the results. It is up to the IS professional community to judge what is accurate and fair. My intention here is to provide food for thought.

Which are the important journals?

Of the many journals which people choose to publish in, the authors included only six

and cost savings, but it was like sandbagging a river that was raging out of control. But the principle focus of these textbooks was the mechanics of algorithms, not the modeling or analysis of results.

Hope for Management Science

Just when things looked darkest, help came from an unexpected source. For me, I first noticed in 1983 that everything I had taught in a five-week session for MBAs in BASIC could be done on a spreadsheet in three weeks on a PC and that students could actually get usable results and be able to graph them! But it wasn't until a few years later that Frontline Systems introduced the add-in solver for Lotus 2.1 and that several pioneers in our profession saw the possibility of putting management science models on spreadsheets. Even then I remained skeptical, because there were some limitations that I didn't think spreadsheets could overcome. Don Plane of Rollins College was the first person I know that was attempting to put most management science models on spreadsheets and he won me over. Along with that came the idea that we could now present models, have the computer do the solution, and focus on analyzing the results instead of finding the solution.

Spreadsheets became a good platform for MS/OR models because students were becoming familiar with spreadsheets through finance and accounting, and thus the platform did not look intimidating. Spreadsheet use also became ubiquitous in the business world and quickly became parts of reports and presentations. As MBA students from business and industry came into part-time programs, they brought a heavy emphasis on spreadsheet use. The ability to do what-if analysis, to chart and

graph results so that numbers could be turned into pictures, all made spreadsheets a part of a manager's arsenal, and with the ability to do MS/OR models also, only strengthened their skills.

Interfaces is now the premier journal for presenting several good business and industry applications to the world every other month and shows that indeed management science is useful. Some of the applications are actually spreadsheet based, while others require larger, more specialized programs or systems, but still illustrate the success of prototype and production models.

Fifteen years after the introduction of the PC, we have moved over to a spreadsheet platform that is much friendlier than the line-by-line, mainframe style of input and output and the spreadsheet communicates better to a wider audience. With the solver add-in by Frontline Systems now standard for Excel, Quattro and Lotus, there is a quick and simple way to get the results of management science models and then make tables, graphs and charts to show the analysis of the results.

Now there are almost a dozen textbooks using this spreadsheet approach, in the hope that the tide can be turned, the dike shored up, and a new positive direction can be achieved for management science. Being able to teach MS/OR using this approach has taken out the drudgery for both teacher and student, and brought back the fun, practical application, and emphasis on analysis, communicating the results both in verbal and written reports.

The Final Hurdle

There are two final hurdles, in my opinion, to getting management science modeling

and analysis back into the mainstream of business schools. First, is the education of the professors to use this technique and to learn to emphasize the modeling of problems and analysis of results. Second, for the AACSB to recognize that MS/OR modeling and analysis is a valuable managerial tool, separate from POM. In this way we might proceed from being "dumb and dumber" to "working smarter, not harder." ■

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where senior faculty members mentor junior faculty members and let them get most of the credit for the teamwork. On the other hand, all three assessment approaches used inflate the research productivity of some senior professors widely known as authorship hounds, demanding from junior faculty or students that their names be included, and/or be placed first, in articles which, in many cases, they have not contributed to.

Last, defining research productive by counting the article's number of pages seems extremely bureaucratic and totally unrelated to the quality of the article or its contribution to the literature. Perhaps more important considerations are estimated number of readers and average number of citations per subsequent articles published on the same topic. ■

Reference

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