

MICHIGAN STATE UNIVERSITY

February 22, 2019

Mr. John R. Folkerth
109 North Main Street
500 Performance Place
Dayton Ohio 45402

Dear Mr. Folkerth:

I am writing in response to your request dated February 18, 2019 to provide an opinion regarding Dr. Kenneth Schultz's tenure review at the Air Force Institute of Technology. I know Dr. Schultz well, as we have both worked and published in the same discipline; behavioral operations management, a subfield of the major field of operations management. We have co-edited a special issue of the *Journal of Operations Management* on this topic, and have one coauthored paper in this area (see bolded items on the list below).

My expertise in this domain is demonstrated below, with 10 publications (8 peer-reviewed, 2 invited), two federally-funded grants, service as co-editor of two special issues, program committee service and invitations to serve as keynote speaker. I have regularly presented my research in this area at conferences. Based on that expertise I believe I am qualified to serve as an external reviewer for Dr. Schultz under the AFIT Standing Rule 7.1.



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I currently serve as an endowed (full) Professor at Michigan State University. I also serve as the Dean with 12 Departments/Schools and over 400 faculty members. As a result, I have many opportunities to evaluate cases for reappointment, promotion and tenure. I fully understand and regularly reinforce the importance of consistency and uniform criteria in these decisions.

Your request included two issues you asked me to address. Below, these issues are reproduced and I provide my opinion on each.

(1) Whether one of the external reviewers (Dr. David R. King), met the qualification requirements as started in the AFIT Standing Rules for the Academic Rank Promotion and Tenure Committee of the Graduate School of Engineering and Management (the "Standing Rules") to act as an external reviewer.

To address this issue I reviewed both the Standing Rules, and the record of Dr. King. The Standing Rules indicate that "An academic reviewer is one who possesses a relevant doctoral degree..." and "The Academic reviewer should hold prominence within the candidate's particular area of specialty..."

In my judgment, Dr. King meets neither of these criteria.

“An academic reviewer is one who possesses a relevant doctoral degree...” Dr. King’s doctoral degree is from the Kelley School of Business at Indiana University. His major was Strategic Management, with minors in Entrepreneurship and Methods & Analyses. While these are all disciplines of business, they are decidedly different than the discipline of Dr. Schultz, Operations Management. I understand that Dr. King has a master’s degree from AFIT in Logistics Management, however this is not the equivalent of a doctorate in the discipline.

“The Academic reviewer should hold prominence within the candidate’s particular area of specialty...” Dr. King has an impressive publication record, especially early in his career, including one publication in each of *Strategic Management Journal*, *Academy of Management Journal*, and *Organization Science*. While these are top-tier journals, they are *not* journals that publish research in Operations Management broadly, or in Behavioral Operations Management specifically. These journals publish research in strategy, which is consistent with Dr. King’s doctoral degree in Strategic Management.

Moving beyond the outlets of his papers, the content of Dr. King’s research is squarely in Strategy. He primarily works on mergers and acquisitions with a secondary focus on organizational culture. Very few of his publications, presentations, or teaching assignments are related to operations management or behavioral operations management.

On this basis, my opinion is that Dr. King does not meet the criteria described in the Standing Rule, either as possessing a relevant doctoral degree, nor as holding prominence within Dr. Schultz’s area of specialty.

(2) Whether the quality and impact of Dr. Schultz’s academic contributions meet or exceed the standards of AFIT in comparison with three comparable members of the AFIT Department of Operational Sciences (“ENS”) who have been granted tenure at the AFIT. (Later in your letter you explicitly name Drs. William Cunningham, Alan Johnson and Jeffrey Ogden).

AFIT’s regulations specify that the “quality and impact of the candidate’s contributions” should “dominate the evaluation.” While I will mention quantity, the conclusions of my comparison will thus focus on “quality and impact.”

I note that in making these comparisons, I am comparing Dr. Schultz’s reported current academic contributions with the publicly reported current academic contributions of the three named individuals, although apparently all are currently Full Professors and Dr. Schultz is being considered only for an Associate Professor position.

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I begin with a comparison of the publication record. Dr. Schultz has 21 total publications, compared with 58 of Cunningham, 35 of Johnson and 46 of Ogden. However, quality is not measured by the number of papers (quantity) but typically by the rank and stature of the journal in which the paper is published. Dr. Schultz's papers are placed in significantly higher-ranked journals, with 11 out of the 21 being in journals ranked in the top ten in SJR's Management Science and Operations Research category, compared with 1 top-ten publication for Dr. Cunningham and 0 for Drs. Johnson and Ogden. Based on these comparisons, the quality of Schultz's work is higher than that of Drs. Cunningham, Johnson and Ogden.

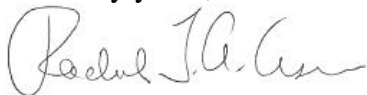
Second would be an evaluation of impact. The most common measure of impact is citation counts; how many other scholars rely on the individual's work in their own. Using Google Scholar, Dr. Schultz has 1,485 citations to his work, with an h-index of 13 and an i-index of 13. In contrast, Dr. Johnson has only 735 citations, with an h-index of 10 and an i-index of 11, a decidedly inferior profile. Dr. Ogden has a superior profile, with more citations (1,609) and higher indices (h-index of 18, i-index of 21). Dr. Cunningham does not have a Google Scholar profile. Based on this comparison, the impact of Dr. Schultz's work is in between that of Dr. Johnson and Dr. Ogden.

A more indirect measure of the impact of a scholar's work is the extent to which they are asked to serve as evaluators of other scholars, as editors, guest editors, associate editors or on editorial boards of journals, invited to give academic presentations or keynotes, serving on conference organizing committees or as session or track chairs. Dr. Schultz has served as editor or guest editor for four journals, been invited to 10 presentations or keynotes, and served in leadership roles for academic conferences 12 times. While a full CV was not available for Drs. Cunningham and Johnson, Dr. Ogden's CV indicates a significantly less impactful profile, with four associate editor or editorial board roles, two session track chairs, and no other service or recognition mentioned. I thus conclude that the impact of Dr. Schultz's body of work is comparable to that of Dr. Ogden; slightly lower on the citation measures but slightly higher on the service and recognition measures.

Based on all these factors, I conclude that the quality and impact of Dr. Schultz's academic contributions meet or exceed the standards of AFIT as evidenced by the promotion of these other individuals.

Please feel free to reach out if I can provide any additional information or be of additional assistance.

Sincerely yours,



Rachel T. A. Croson,
Dean, College of Social Science

Bio:

Rachel Croson received her PhD in Economics from Harvard University in 1994. She served for 13 years as a faculty member in the Department of Operations and Information Management at the Wharton School of the University of Pennsylvania, where she earned tenure and began her research in behavioral operations management. She has since served as a Professor and Center Director at University of Texas Dallas, in a Senior Executive Service position at the National Science Foundation, and as Dean of the College of Business at the University of Texas Arlington. She is currently the Dean of the College of Social Science at Michigan State University.

Peer-reviewed Journal Articles in Operations Management:

- [1] “Experimental Economics and Supply Chain Management.” (with Karen Donohue) *INTERFACES*, Vol 32, 2002, pp. 74-82.
- [2] “The Impact of POS Data Sharing on Supply Chain Management: An Experimental Study.” (with Karen Donohue) *Production and Operations Management*, Vol 12, 2003, pp. 1-11.
- [3] “Upstream versus Downstream Information and Its Impact on the Bullwhip Effect.” (with Karen Donohue) *System Dynamics Review*, Vol 21, 2005, pp. 249-260.
- [4] “Behavioral Causes of the Bullwhip Effect and the Observed Value of Inventory Information.” (with Karen Donohue) *Management Science*, Vol 52, 2006, pp. 323-336.
- [5] **Bodies of Knowledge for Behavioral Operations Management.” (with Elliot Bendoly, Paulo Goncalves and Kenneth Schultz). *Production and Operations Management*, Vol 19(4), 2010, pp. 434-452.**
- [6] “Overconfidence in Newsvendor Orders: An Experimental Study.” (with Yufei Ren). *Management Science*, Vol 59, 2013, pp. 2502-2517.
- [7] “Order Stability in Supply Chains: Coordination Risk and the Role of Coordination Stock.” (with Karen Donohue, Elena Katok and John Sterman). *Production and Operations Management*, Vol 23, 2014, pp. 176-196.
- [8] “The Overconfident Newsvendor” (with Yufei Ren and David Croson). *Journal of the Operational Research Society*, Vol 68, 2017, pp. 496-506.

Non Peer-Reviewed Publications in Operations Management:

[9] Supply Chain Management: A Teaching Experiment.” (with Elena Katok, Karen Donohue and John Sterman) *Experimental Business Research III*, Zwick (ed.), 2005. Springer. pp. 285-296.

[10] “Special Issue Introduction.” (with Noah Gans). *Manufacturing Service and Operations Management*, Vol 10, 2008, pp. 563-565.

Federally-Funded Grants in Operations Management:

National Science Foundation Grant #SBR-9753130, \$50,036, Fall 1997: “Dynamic Behavior in Supply Chains: Experimental Investigations”

National Science Foundation Grant #SBR-0214337 (with Elena Katok), \$103,313, Fall 2002 “Behavioral Causes of Information Distortion in Supply Chains”

Service to the field of Operations Management:

Co-Editor, Special Issue of *Manufacturing and Service Operations Management: Behavioral Issues in Operations Management* (with Noah Gans), 2008

Co-Editor, Special Issue of *Journal of Operations Management: Behavioral Operations* (with Enno Siemsen and Ken Schultz), 2012

Program Committee, Behavioral Operations Management Workshop, 2015

Keynote Speaker, *Supply Chain Thought Leaders Roundtable* 2006.

Keynote Speaker, *Behavioral Operations Management Conference, Tsinghua University* 2011.

Conference presentations in Operations Management:

Behavioral Operations Conference, Harvard Business School, 2006

Behavioral Research in Operations and Supply Chain Management Conference, Penn State, 2006

Thought Leaders in Supply Chain Research, Washington University, 2006

Behavioral Operations Management, University of Minnesota, 2007

Behavioral Operations Management, University of Alberta, 2008

Behavioral Operations Management, University of Virginia, 2010