

THE UNIVERSITY

of NORTH CAROLINA

at CHAPEL HILL

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Mr. John R. Folkerth, Jr. Foulkerth + Routh LLC 109 North Main Street 500 Performance Place Dayton, Ohio 45402

Dear Mr. Folkerth:

This letter is in reply to your request to provide feedback on two aspects of Dr. Ken Schultz's tenure review at the Air Force Institute of Technology (AFIT). I first learned of Dr. Schultz's work when I was a doctoral student at Harvard Business School. I subsequently have interacted with him during conferences. I have seen him present his research and also had a chance to discuss his work through the years. I do not believe that I have a conflict of interest with Ken, as defined by any journals or governing bodies of which I am aware. In terms of my own qualifications to assess his case, I am attaching my CV for more information. I hold the title of Professor of Operations at the University of North Carolina at Chapel Hill, Kenan-Flagler Business School. Not only am I active in publishing in leading operations' journals, but I serve in editorial roles at *Management Science, Manufacturing & Service Operations Management, and Production and Operations Management.* Moreover, my research around behavioral operations and empirical operations leaves me well-suited to assess Ken's case.

I have been asked to provide my opinion with respect to two aspects of Dr. Schutlz's case:

- An evaluation of whether the chosen external reviewer fits the stated requirements
- Whether the quality and impact of Dr. Schultz's work meets or exceeds the standards of AFIT in comparison to three comparable department members.

I will begin with the first item. As I understand it the stated requirement is the following:

7.2.1 Academic Reviewers. An academic reviewer is one who possesses a relevant doctoral degree and is or has been a tenured, graduate faculty member at the rank of Associate Professor or Professor within an academic department with educational and research activities similar, or superior in stature, to those of the candidate's department. The academic reviewer should hold prominence within the candidate's particular area of specialty and will predominantly belong to a Ph.D.-granting department. Some programs within the Graduate School may not offer the Ph.D. In such cases, it may be appropriate to use academic reviewers in non-Ph.D.-granting programs at other institutions. The use of reviewers with relatively junior rank or unclear expertise is not appropriate and will generally weaken the candidate's case.

My reading of the requirement is that the external reviewer should come from a school that is "similar, or superior in stature" and that the "academic reviewer should hold prominence within the candidate's particular area of specialty". With respect to the first criteria, Florida State University is of similar or superior stature as compared to AFIT.

However, with respect to the second criteria the external reviewer is wholly unqualified. I had never heard of Dr. David King, but that by itself is not conclusive. Reviewing his website and his CV shows that he is a reputable scholar, but wholly unfit to evaluate Dr. Schultz's work. To begin with, Dr. King has a PhD in strategy and entrepreneurship. I assume he might have been chosen since he has a master's degree from AFIT, but a master's degree is largely if not completely irrelevant to this discussion. Dr. Schultz's work is in operations, not strategy and entrepreneurship so I do not know why a scholar from another area of specialty would be chosen. Examining Dr. King's list of publications again shows evidence of his qualifications in his specialty – mergers and acquisitions – but that is not an area that is relevant to Dr. Schultz. At no point do I see publication in any primary operations journals. At UNC those would include *Operations Research, Management Science, Manufacturing & Service Operations Management, or Production and Operations Management.* There are many scholars who would be qualified to evaluate Dr. Schultz's work. I would be happy to provide such a list. However, to answer the first question posed, in my professional opinion, I find Dr. King a wholly inappropriate reviewer for Dr. Schultz seeing as he does not hold prominence in Dr. Schultz's area of specialty.

The second question I have been asked to provide a perspective on is the quality and impact of Dr. Schultz's work compared to three colleagues: Dr. William Cunningham, Dr. Alan Johnson, and Dr. Jeffrey Ogden. Dr. Cunningham and Dr. Ogden have active websites at their respective schools. I do not see an active website for Dr. Johnson, however, there is a Google Scholar page with his publications.

To begin, I should say that assessing the quality and impact of a scholar is a multi-dimensional affair. A raw count of publications is never a sufficient exercise. One must consider the impact of a scholar's work. This can be seen by different factors such as what journals an author publishes in, citations of one's work, how the field evolves as a result of one's work, and through a careful read of one's papers. Dr. Schultz is a high quality and impactful scholar. The most fundamental evidence of this fact is that he helped to found an entire branch of the field – behavioral operations. His work in the 1990s, followed by his nurturing of the new field in the 2000's created an important area whereby people actively consider the role of people within the operating systems in which they function. His central role in the field can be seen through his subsequent reviews and special issues of journals that he co-edited.

The impact of Dr. Schultz's work can also be seen through his publications in high quality journals, such as *Management Science*, *Manufacturing & Service Operations Management*, and *Production and Operations Management*. This is a hard task. Acceptance rates at these journals are quite low. Moreover, if one looks at the papers the quality shows through. One of my favorite papers of his is, "Modeling and worker motivation in JIT production systems." This paper is remarkable as it was an experimental paper published in *Management Science* in the 1990s. It really did help to kick off a field. Moreover, the paper took a critical operations topic – JIT systems – and then considered how people fit in. How do service rates change with respect to

load? This critical observation and rigorous empirical examination kicked off a long line of work that recognized service rates are endogenous to load. I also, find "An example and a proposal concerning the correlation of worker processing times in parallel tasks" published in *Management Science* to be a great example of Dr. Schultz's work. Here he uses unique empirical, manufacturing data to examine how workers interact and how this in turn impacts operational performance. The quality of the journals in which he publishes and even more fundamentally the quality of the ideas in Dr. Schultz's work are excellent.

With respect to the direct comparison to the three specific individuals noted above, I believe that Dr. Schultz's record most certainly meets them and, in my opinion, exceeds them. As an external reviewer of Dr. Schultz I am well-qualified to evaluate him on any dimension. As an external reviewer for the other three I am well-qualified to evaluate them, to the extent the area of specialty is operations, however, if one shrinks it to something smaller then that would not be my focus area. Still, as I look at each of the three, I see a higher raw count of papers. However, contribution is not just a count of papers, but journal, impact, and quality of ideas. Dr. Schultz is exceptional on these dimensions, as noted above. If one looks at Google Scholar for citations then the data shows that Dr. Schultz has 804 since 2014, while Dr. Johnson (364) and Dr. Ogden (757) have less (I do not see a number for Dr. Cunningham). At UNC Kenan-Flagler we use a list of journals for what is considered in the tenure process and with that list, Dr. Schultz would perform quite well and the others would not. Finally, as mentioned above, Dr. Schultz's work has proven transformational to the field of operations creating an entire new area of research – behavioral operations.

Overall, I would note that Dr. Schultz is an active member of the operations community and is well-regarded in the field. His research record is strong and his identity is clear. The field is better for Dr. Schultz's contributions and I believe that AFIT is a stronger institution for his presence. Overall, I strongly and without reservation recommend Dr. Schultz for promotion to Associate Professor with tenure. Dr. Schultz's research has established him as a worldwide expert in behavioral operations. Please contact me with any questions.

All the best,

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