
Traditional operations management (OM) research often assumes rational behavior and solutions based on optimal selection of the design of processes by decision makers. However, empirical results reveal unexplained effects such as the bullwhip phenomenon and these observations have given rise to the expanding research area of behavioral OM (Gino and Pisano, 2008). This area encompasses the interface of OM and behavioral decision-making research and often helps to address questions focusing on anomalies encountered in OM processes. The objective of this research is to study the scholarly trends and topics in the most recent ten-year period (2008-2017) to assimilate the developments and research directions of the relevant field of behavioral OM in the supply chain management (SCM) literature of major journals publishing OM research.

This research objective will benefit researchers in understanding the evolving issues and potential areas of future research in the intersection of operations management and behavioral decision sciences. Several papers review the SCM literature to identify and define the taxonomy of operations management over several decades. However, these papers discuss operations management more holistically encompassing both analytical, empirical, and behavioral aspects of the discipline. The research in our paper focuses only on behavioral operations management. It uses the following keywords in studying these papers: human, behavioral, cognitive, experiment, psychology, and judgement. The practical significance of this research is that researchers will have a collective extraction of OM developments, some of which may be divergent, over a ten-year span and the “core topics” in OM behavioral research.

Latent Semantic Analysis (LSA) has been used in numerous studies to improve the prediction of “topics” (latent factors) from a body of research and to identify hidden trends in the
research literature (Kundu et al., 2015). This approach, also referred to as text mining, provides a conceptualization of research directions. It removes the subjectivity in proposing a behavioral theoretical framework. We used the websites of four selected journals to collect targeted journal articles. Four journals are searched for behavioral OM papers: *Journal of Operations Management, Management Science, Manufacturing and Service Operations Management*, and *Production and Operations Management*. Although numerous other journals in the OM discipline are reputed outlets for behavioral OM, only these four journals were included to ensure that the research is of high quality and at the forefront of OM research. For each article, the year, the journal, the title, and the abstract are all collected. The papers are reviewed manually to ensure that the research does involve behavioral aspects of OM. The LSA procedure can identify keywords (terms) and latent factors (topics) from around 200 articles to provide insight into research directions. Like traditional factor analysis, LSA provides loadings for the latent semantic factors that can be used in interpretation as well as in models to examine research trends. Based on these results, we do a trend analysis of research topics for the period 2008 to 2017. The direction of research trends from the selected top OM journals will assist researchers in figuring out the forefront of the future. The advantage of LSA is that it provides a reasonable approximation of how human experts would classify topics in OM discipline without the subjective influence.

What makes our research different from previous OM research using text mining is that we restrict our research to only behavioral OM papers and only in four top “prestigious” journals. Our research provides a projection of the scholarly categories in this field that may be insightful from a holistic systems viewpoint. A possible paradigm shift is occurring in OM as studies recognize the importance of incorporating experimental behavioral aspects of decision
making into OM models. SCM will benefit from this wide range of behavioral analysis by being able to identify specific behavioral aspects that enhance the performance of the entire supply chain.

In the past, behavioral research was often identified with an investigation of consumer behavior. Examining behavioral research of decision-makers at various levels of the supply chains has blossomed in recent years into a “core” research area in OM. Research themes within any core research area are dynamic as the environment changes and their breadth will evolve over time. Much of the research in OM may seem stable over time. However, disparities ebb and flow in published research, particularly in studies of the interaction of human behaviors and operational production processes. A growing number of experimental studies have advanced the understanding of human behavior and operations (Croson et al., 2013; Stangl and Thonemann, 2017). This paper uses an LSA approach in organizing and identifying the nature and importance of research in behavioral OM.

Reference