Oral Defense Announcement
University of Missouri – St. Louis Graduate School

An oral examination in defense of the dissertation for the degree
Doctor of Business Administration with an emphasis in Logistics & Supply Chain Management

Honey Zimmerman

M.B.A., August 2004, Western Illinois University
B.B. in Management, December 2002, Western Illinois University

Exploring the Influence of Industry 4.0 Technology on Buyer-supplier Relationships
(Supplier Transparency) and Supply Chain Agility

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Place: Anheuser Busch Hall 106

Abstract
Constantly evolving technologies enable supply chains around the world to thrive and become progressively more sophisticated and responsive. Industry 4.0 (I4.0) technologies connect supply chain networks like never before. Still, anecdotal evidence suggests that few firms have implemented such technologies enterprise-wide. Therefore, to investigate the value created with such technology implementation, this study focuses on buyer-supplier relationships (BSR) and firm supply chain agility (FSCA) in the context of I4.0 technologies. Using mixed methodologies within a single-case study, we set out to answer the research question: Does I4.0 technology influence buyer-supplier relationships and firm supply chain agility, and if so, how? In this exploratory research, data was collected and analyzed in two phases through focus groups and individual interviews (qualitative) and surveys (quantitative) of a single buying firm and its suppliers. The primary purpose of this study is to investigate the effects of I4.0 technology to understand the value of I4.0 adoption better. Secondary goals of this study include learning more about information exchange within BSRs (supplier transparency) and FSCA. By maintaining matched dyads during data collection, we can glean richer insights into perceptions within supply chain relationships. The results from the quantitative analysis in this study reveal that the I4.0 technology had little to no effect on the perceived supplier transparency and FSCA, despite the perceptions expressed in the qualitative phase. However, we found that supplier transparency explains a large portion of the variation in FSCA. This relationship between supplier transparency and FSCA is the most significant contribution of this study and presents an opportunity for further research.

Keywords: I4.0, Industry 4.0 technology, buyer-supplier relationships, firm supply chain agility, supplier transparency

Defense of Dissertation Committee
George A. Zsidisin, Ph.D. (Chair)
Norman K. Womer, Ph.D.
Florian Schupp, Ph.D.