

Patricia Angle
Curriculum Vitae

CONTACT INFORMATION

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EDUCATION

2019 July (expected)	Georgia Institute of Technology - Atlanta, Georgia Ph.D., Information Technology Management
1998 May	University of Michigan - Ann Arbor, Michigan M.S.E. Aerospace Engineering
1996 May	University of Michigan - Ann Arbor, Michigan B.S.E. Aerospace Engineering

DISSERTATION

Title: Information Technology and Organizational Complementarities: Two Empirical Essays in the Manufacturing Sector

Abstract: My research centers on the impact of information technology (IT) investments on business processes. I seek to understand the way organizations use software to share information with partners in trade and facilitate innovation. Information-sharing IT and process innovation are complementary under the right circumstances, and understanding why and how the strategic use of software impacts organizations has wide-ranging implications, from supply-chain structure to understanding the contribution of the manufacturing sector to the national economy. The first chapter of my dissertation uses proprietary Census data to investigate the impact of e-selling on total factor productivity (TFP). I find that although large plants see a TFP increase related to e-selling, small plants do not. This has implications for understanding economies of scale related to IT within organizations. The second chapter of my dissertation is an investigation into complementarities between IT and a firm's research and development (R&D) efforts. While there has been considerable attention paid to IT as a complement to firm capabilities, there is less work examining complementarities between IT and other inputs to innovation. This research represents a novel investigation into the relationship between IT investments and a firm's innovative strategy.

Dissertation Committee: Dr. Chris Forman (co-chair), Dr. Marco Ceccagnoli (co-chair), Dr. Marius Florin Niculescu, Dr. Sabyasachi Mitra, Dr. Eric Overby

RESEARCH AREAS OF INTEREST

IT and Productivity
IT-enabled Innovation
Business Analytics
Economics of IT
Electronic Commerce
IT within the Supply Chain

SCHOLARLY WORK

A. SUBMITTED JOURNAL ARTICLES AND RESEARCH IN PROGRESS

Does IT Level the Playing Field for Small Establishments? Evidence from Manufacturing

Co-author: Chris Forman (Cornell University)

Abstract: In this paper, we explore the value of information technology on the productivity of manufacturing plants. We examine the impact of one such technology, e-selling, on total factor productivity (TFP). We find that, on average, e-selling adoption is associated with a 1.4% increase in TFP. However, these returns differ significantly between small and large plants. On average, for plants above a very low size threshold, the increase in TFP is 2%. For very small plants, the returns to e-selling are statistically indistinguishable from zero. This provides evidence that economies of scale are relevant even in technologically advanced sectors. We further explore this finding in the context of other plant and firm characteristics. *Under review.*

An investigation of IT, R&D, and propensity to innovate

Co-authors: Chris Forman (Cornell University) and Marco Ceccagnoli (Georgia Tech)

Abstract: This study is an investigation into complementarities between IT and a firm's R&D activity, in the context of product innovation. Whether the sharing of information within the firm is complementary with research performed by the firm or a substitute for firm-generated knowledge is unclear. Using U.S. Census microdata on R&D and IT expenditures, we measure the impact of a firm's IT investments on the relationship between R&D and innovative output. *Research in progress.*

B. CONFERENCE AND WORKSHOP PRESENTATIONS

1. Angle, Patricia and Chris Forman. "Does IT Level the Playing Field for Small Establishments? Evidence from Manufacturing." CIST 2017. Houston, Texas. October 2017. *Session Chair.*
2. Angle, Patricia and Chris Forman. "When is IT most valuable? An investigation of e-selling and plant size." Poster session. Academy of Management OCIS Division. Atlanta, Georgia. August 2017.

3. Angle, Patricia, Chris Forman, and Kristina McElheran. "E-commerce in the manufacturing supply chain: an empirical analysis." INFORMS 2016 Annual Meeting. Nashville, Tennessee. November 2016.
4. Angle, Patricia, Chris Forman, and Kristina McElheran. "E-commerce in the manufacturing supply chain: an empirical analysis." Production and Operations Management Annual Meeting. Orlando, Florida. May 2016.
5. Angle, Patricia, Chris Forman, and Kristina McElheran. "E-commerce in the manufacturing supply chain: an empirical analysis." Workshop on Information Systems and Economics (WISE). Fort Worth, Texas. December 2015.
6. Angle, Patricia, and Chris Forman. "When is IT most valuable? An investigation of e-selling and plant size." 2015 Atlanta Census Research Data Center (ACRDC) Annual Research Conference. Atlanta, Georgia. October 2015.

C. INVITED TALKS

1. Angle, Patricia, Chris Forman, and Kristina McElheran. "E-commerce in the manufacturing supply chain: an empirical analysis." Center for Economic Studies seminar presentation. Washington D.C. April 2016.

D. HONORS

2018 April	Nominee, PhD Candidate division, Undergraduate Faculty of the Year Awards
2017 August	Academy of Management Organizational Communication and Information Systems Division Doctoral Consortium Member
2017 August	Americas Conference on Information Systems Doctoral Consortium Member
2015 December	Best Student Paper finalist, Workshop on Information Systems and Economics (WISE).
2015 November	Center for Economic Studies Dissertation Mentorship Program. 28 th participant. Mentor: Cheryl Grim

E. OTHER CONFERENCES ATTENDED

1. Americas Conference on Information Systems 2017
2. Conference on Information Systems and Technology 2016
3. International Conference on Information Systems 2015
4. Sandy A. Slaughter Software Conference 2015 – volunteer
5. Business Analytics and Big Data Conference 2015 - volunteer
6. Big Data Industry Forum 2014
7. Health IT Leadership Summit 2014
8. International Conference on Information Systems 2013
9. Roundtable for Engineering Entrepreneurship Research 2013

TEACHING EXPERIENCE

Fall 2018	MGT 4050 Data Analytics <i>in progress</i>
Spring 2018	MGT 4053 Business Data Communications 4.25/5.00
Summer 2017	MGT 4053 Business Data Communications 4.89/5.00
Fall 2016	MGT 4053 Business Data Communications 3.94/5.00
Fall 2015	MGT 4053 Business Data Communications 3.67/5.00

TEACHING ASSISTANT

Summer 2018	MGT 6203 Data Analytics for Business
Spring 2018	MGT 4057 Business Process Analysis and Design
Fall 2017	MGT 4052 Systems Analysis and Design
Spring 2017	MGT 2200 Information Technology Management
Fall 2016	MGT 2200 Information Technology Management
Spring 2016	MGT 6057/MGT 4057 Business Process Analysis and Design
Fall 2015	MGT 6057/MGT 4057 Business Process Analysis and Design
Spring 2015	MGT 6057/MGT 4057 Business Process Analysis and Design
Fall 2014	MGT 4803 IT Project Management
Fall 2014	MGT 4053 Business Data Communications
Fall 2014	MGT 4052 Systems Analysis and Design
Spring 2014	MGT 4803 IT Project Management
Spring 2014	MGT 4053 Business Data Communications
Spring 2014	MGT 4052 Systems Analysis and Design
Fall 2013	MGT 4803 IT Project Management
Fall 2013	MGT 4053 Business Data Communications
Fall 2013	MGT 4052 Systems Analysis and Design

SERVICE

A. INSTITUTIONAL SERVICE

1. Graduate student representative, Scheller College of Business PhD Committee. 2016-2017 academic year.
2. Safe Space training to support LGBTQ+ students, November 2017

B. JOURNAL REVIEWER

1. Information Systems Research

C. CONFERENCE REVIEWER

1. 2018 Conference on Information Systems and Technology

2. 2017 Conference on Information Systems and Technology
3. 2016 Conference on Information Systems and Technology
4. 2016 European Conference on Information Systems
5. 2015 Conference on Information Systems and Technology
6. 2015 International Conference on Information Systems
7. 2015 European Conference on Information Systems
8. 2014 Workshop on Information Technologies and Systems

D. CONFERENCE VOLUNTEER

1. 2015 Sandy A. Slaughter Software Conference. Atlanta, Georgia
2. 2015 Business Analytics and Big Data Conference. Atlanta, Georgia

E. PROFESSIONAL MEMBERSHIPS

1. Academy of Management
2. Association for Information Systems
3. The Institute for Operations Research and the Management Sciences

F. SERVICE IN THE COMMUNITY

1. Mentorship. I am working with a high school student who is learning how to conduct an academic research study in IT management. 2018 - present.
2. IRun4. I run in the place of a child named Annemarie who is physically unable to run or walk. 2015 - present.

REFERENCES

Dr. Chris Forman

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Strategy, Innovation, and Technology
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