

George Ball

Associate Professor, Weimer Faculty Fellow

Operations and Decision Technologies Department, Kelley School of Business, Indiana University

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EXPERIENCE

Kelley School of Business, Indiana University, Bloomington, IN

Associate Professor, Operations and Decision Technologies Department	2021 - Present
Assistant Professor, Operations and Decision Technologies Department	2015 - 2021

EDUCATION

Carlson School of Management, University of Minnesota, Minneapolis, MN

Ph.D. Operations Management	2015
Dissertation Title: <i>Organizational, Operational, and Behavioral Causes of Product Recalls</i>	
Committee: Rachna Shah (Advisor), Karen Donohue, Serguei Netessine, Enno Siemsen	

Carlson School of Management, University of Minnesota, Minneapolis, MN

Executive Master of Business Administration	2003
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United States Naval Academy, Annapolis, MD

Bachelor of Science	1994
Major: Aerospace Engineering	

RESEARCH

Publications

1. Mukherjee, U., Ball, G., Wowak, K., Natarajan, K., Miller, J. (2021). "Hiding in the Herd: The Product Recall Clustering Phenomenon" *Manufacturing & Service Operations Management*. Articles in Advance <https://doi-org.proxyiub.uits.iu.edu/10.1287/msom.2020.0937>
2. Wowak, K., Ball, G., Post, C., Ketchen D. (2021). "The Influence of Female Directors on Product Recall Decisions" at *Manufacturing & Service Operations Management*. Articles in Advance <https://doi.org/10.1287/msom.2019.0841>
3. Schmidt, C., Wuttke, D., Ball, G., Heese, H.S. (2020). "Does Social Media Elevate Supply Chain Importance? An Empirical Examination of Supply Chain Glitches, Twitter Reactions, and Stock Market Returns" *Journal of Operations Management*, 66(6), 646-669.
4. Ball, G., Shah, R., & Donohue, K. (2018). "The Decision to Recall: A Behavioral Investigation in the Medical Device Industry" *Journal of Operations Management*, 62: 1-15.
5. Ball, G., Shah, R., & Wowak, K. (2018). "Product Competition, Managerial Discretion and Manufacturing Recalls in the U.S. Pharmaceutical Industry" *Journal of Operations Management*, 58: 59-72.
6. Ball, G., Siemsen, E., & Shah, R. (2017). "Do Plant Inspections Predict Future Quality? The Role of Investigator Experience" *Manufacturing & Service Operations Management*, 19(4): 534-550.

7. Shah, R., Ball, G., & Netessine, S. (2017). "Plant Operations and Product Recalls in the Automotive Industry: An Empirical Investigation" *Management Science*, 63(8): 2439-2450.

Manuscripts Under Review

8. Mayo, K., Ball, G., & Mills, A. "CEO Tenure and Recall Risk Management in the Consumer Products Industry"
9. Ball, G., Macher, J., & Stern, A. "Product Recalls and New Product Development: Own Firm Distractions and Competitor Firm Opportunities"
10. Noh, I., Gray, J., Ball, G., & Park, H. "Are Generics Safe? A Drug-Level Analysis"
11. Ball, G., Bavafa, H., Blanco, C., & Park, H. "User-Generated Web Data Predicts Quality Risk: Evidence from the Pharmaceutical Industry"
12. Ball, G., Beer, R., & Parker, R. "Regulator Mandated Recalls and Female Consumers: A Multi-Method Study on Recall Decisions and their Consequences"
13. Astvansh, V., Ball, G., Josefy, M. "The Recall Decision Exposed: Auto Recall Timing and Process Dataset."
14. Darby, J., Ketchen, D., Ball, G., Mukherjee, U. "Bad Things Come to Those Who Wait: Firm Stock Ownership, Recall Timing, and Stock Market Penalties."

Research Grants

1. Investigator on 3-year, \$35,000,000 Food and Drug Administration (FDA) quality scorecard grant as a research member of the National Institute for Pharmaceutical Technology and Education (NIPTE)
2. Co-Principal Investigator on 2-year, \$1,700,000 FDA grant to help FDA predict and improve drug firm quality management and learning to reduce drug quality risks.

Research Impact on U.S. Government Policy

1. Member of National Academies of Sciences, Engineering and Medicine Committee on the Security of America's Medical Product Supply Chain <https://www.nationalacademies.org/our-work/security-of-america-s-medical-product-supply-chain#sectionCommittee>
2. Research on inspections cited in, and used to develop, EPA Risk Management Regulation https://www.epa.gov/sites/production/files/2016-12/documents/rmp_rtc_compiled_12-21-16.pdf

Media Interviews and Mentions

1. "The device recall crystal ball" interviewed for Medical Device Network <https://www.medicaldevice-network.com/features/the-device-recall-crystal-ball/>
2. "Automakers Delay Recalls to Minimize Negative Attention: Study" covered in Car and Driver: <https://www.caranddriver.com/news/a35649626/automakers-delay-recalls-study/>
3. "More Women on Boards, Fewer Dangerous Products" covered in The Wall Street Journal: <https://www.wsj.com/articles/more-women-on-boards-fewer-dangerous-products-11586284077>
4. "Coronavirus Treatments-If More Women Are On the Board, It's Likely Safer, New Study Finds" covered in Forbes: <https://www.forbes.com/sites/joanmichelson2/2020/05/09/coronavirus-treatmentsif-more-women-are-on-the-board-its-likely-safer-new-study-finds/#5a1750261f35>
5. "Academic Focus Limits Business School's Contributions to Society" covered in Financial Times: <https://www.ft.com/content/5953739c-3b94-11ea-b84f-a62c46f39bc2?emailId=5e5403f47365c30004d34a0d&segmentId=f5ff1a1a-1590-1863-3861-e9c91a6a3b7f>

6. “Why Companies Should Try Harder to Prevent Product Recall” covered in Forbes:
<https://www.forbes.com/sites/hbsworkingknowledge/2019/03/07/why-companies-should-try-harder-to-prevent-product-recalls/#e31b45a4bec9>
7. “Can Samsung survive its exploding-phones crisis” interview on CBS news:
<https://www.cbsnews.com/news/can-samsung-survive-its-exploding-galaxy-note-7-phone-crisis/>
8. “Medical Device Manufacturers Rely on Doctors to Find Defects” interview with NPR:
<https://indianapublicmedia.org/news/study-medical-device-manufacturers-rely-on-doctors-to-find-defects.php>
9. “Study finds that generic drugs suffer more recalls” interview with Indianapolis Business Journal:
<https://www.ibj.com/articles/69116-study-finds-that-generic-drugs-suffer-more-recalls>
10. “Generic drugs are competing against one another to get cheaper-but it’s having an unintended consequence on the health of Americans” interview with Business Insider: <https://www.msn.com/en-in/news/other/generic-drugs-are-competing-against-one-another-to-get-cheaper-but-its-having-an-unintended-consequence-on-the-health-of-americans/ar-AAyjrY6>
11. “As generic drug competition increases, so do product recalls” interview with FDAnews:
<https://www.fdanews.com/articles/187154-as-generic-drug-competition-increases-so-do-product-recalls-study-finds>
12. “Medical device managers less likely to issue recalls if physicians find defects: 3 study insights” covered in Becker’s Healthcare: <https://www.beckersasc.com/supply-chain/medical-device-managers-less-likely-to-issue-recalls-if-physicians-find-defects-3-study-insights.html>
13. “BFFs with FDA? Repeat Visits From Investigators Can Lead to Poor Device Quality, Recalls, Study Suggests” covered in Pharmaintelligence.com:
<https://medtech.pharmaintelligence.informa.com/MT121849/BFFs-With-FDA-Repeat-Visits-From-Investigators-Can-Lead-To-Poor-Device-Quality-Recalls-Study-Suggests>
14. “Device Recalls Surge in Recent Years, Prompting Question: Why?” covered in General Surgery News:
<https://www.generalsurgerynews.com/Article/PrintArticle?articleID=35860>
15. “Overtime and Growth of Factory-Installed Options May be Culprits in Record Recalls” covered in Edmunds.com:
<https://www.edmunds.com/car-news/overtime-and-growth-of-factory-installed-options-may-be-culprits-in-record-recalls.html>
16. “7-Year FDA Review Reveals Importance of Rotating Plant Inspectors” covered in: Engineering.com
<https://www.engineering.com/AdvancedManufacturing/ArticleID/15823/7-Year-FDA-Review-Reveals-Importance-of-Rotating-Plant-Inspectors.aspx>
17. “Inspectors could reduce medical device recall rates by 20%” covered in Clinical-innovation.com:
<http://www.clinical-innovation.com/topics/analytics-quality/reducing-medical-device-recall-rates-20>
18. “Unfixed Recalls an Ongoing Issue” interview on PetroChoice.com:
<https://www.petrochoice.com/unfixed-recalls-an-ongoing-issue/>

WORKSHOPS and PRESENTATIONS:

Annual Conference Presentations

1. MSOM Annual Meeting. Special Interest Group (SIG) Healthcare Operations Management Co-Chair. (June 2021).
2. INFORMS Annual Meeting. “User-Generated Web Data Predicts Quality Risk: Evidence from the Pharmaceutical Industry” with H. Bavafa, C. Blanco, H.P. Park. (October 2020).

3. POMS Annual Meeting. Panelist and Session Moderator for “Conducting Research with External Stakeholders such as government agencies and firm” in Operational Excellence Mini-Conference. (May 2019).
4. POMS Annual Meeting. Invited Session presenter. “Quality inspections, gender and customer intimacy” with P. Kent. (May 2019).
5. POMS Annual Meeting. Invited Session Chair on product recall research. (May 2019).
6. POMS Annual Meeting. Invited Session Panelist addressing secondary data research. “Secondary Data Resources and Methods Used in Recall Research.” (May 2018).
7. POMS Annual Meeting. “The Influence of Female Board Representation and Managerial Discretion on Product Recalls” with K. Wowak, C. Post, and D. Ketchen. (May 2018).
8. POMS Annual Meeting. Session Leader for Product Recall Research. Invited Session in Operational Excellence Track on Product Recalls. (May 2018).
9. INFORMS Annual Meeting. “Product Innovation Consequences of Product Recalls in the Medical Device Industry” with A. Stern and J. Macher (Oct 2017)
10. INFORMS Annual Meeting. “The Decision to Recall: A Behavioral Investigation in the Medical Device Industry” with R. Shah and K. Donohue (Nov 2016)
11. INFORMS Annual Meeting. “Board Composition and Product Recall Decisions in FDA Regulated Industries: The Effect of Female Board Representation” K. Wowak, C. Post, and D. Ketchen (Nov 2016).
12. INFORMS Annual Meeting. “Responsiveness and Learning in the Medical Device Recall Process” with R. Shah (Nov 2016).
13. POMS Annual Meeting. “Follow the Leader: Spillover Effects of Product Recalls” with K. Wowak, U. Mukherjee and J. Miller (May 2016).
14. POMS Annual Meeting. “Market Competition and Firm Efficiency Effects on Product Recalls” with R. Shah and K. Wowak (May 2016).
15. POMS Annual Meeting. “Fast to Respond or Slow to Learn: An Empirical Examination of the Recall Responsiveness Dilemma” with R. Shah (May 2016).
16. INFORMS Annual Meeting. “The Decision to Recall: A Behavioral Investigation in the Medical Device Industry” with R. Shah and K. Donohue (Nov 2015).
17. POMS Annual Meeting. “Fast or Slow: An Empirical Examination of Product Recall Responsiveness” with R. Shah (May 2015).
18. POMS Annual Meeting. “Market Competition and Firm Efficiency Effects on Product Recalls” with R. Shah and K. Wowak. (May 2015).
19. POMS Annual Meeting. “Leading Indicators of Recalls in the US Pharmaceutical Industry” with R. Shah (May 2014).
20. POMS Annual Meeting. “The Decision to Recall: A Behavioral Investigation in the Medical Device Industry” with R. Shah and K. Donohue (May 2014).
21. Decision Sciences Institute Annual Meeting. “Product Recall Duration and Future Medical Device Recalls” with R. Shah (Nov 2013).
22. INFORMS Annual Meeting. “Plant Operations and Product Recalls in the Automotive Industry: An Empirical Investigation” with R. Shah and S. Netessine (Oct 2013).
23. Multi-disciplinary Academic Research Summit Annual Conference, Carlson School of Management. “Inspections, Recalls, and Auditors: Process Quality Information in Medical Device Manufacturing” with E. Siemsen and R. Shah (Aug 2013).
24. POMS Annual Meeting. “FDA Quality Inspections and Medical Device Recalls: Understanding the Effectiveness of the Auditing Process” with E. Siemsen and R. Shah (May 2013).

25. Decision Sciences Institute Annual Meeting. “The Decision to Recall: A Behavioral Investigation in the Medical Device Industry” with R. Shah and K. Donohue (Nov 2012).
26. POMS Annual Meeting. “Product Recalls and the Shop-Floor: How Manufacturing Decisions Can Influence Product Recalls” with R. Shah (May 2012).
27. Decision Sciences Institute Annual Meeting. “The Nature of a Recall” with R. Shah (Nov 2011).
28. POMS Annual Meeting. “The Impact of Manufacturing Inventory Levels on New Product Innovativeness” with R. Shah (May 2011).

Invited Presentations

29. *University of North Carolina Chapel Hill, Kenan-Flagler Business School.* “Fast or Slow: An Empirical Examination of Product Recall Responsiveness” with R. Shah (Nov 2015)
30. *University of Notre Dame, Mendoza College of Business.* “Fast or Slow: An Empirical Examination of Product Recall Responsiveness” with R. Shah (Nov 2015)
31. *Food and Drug Administration, White Oak, MD.* “Medical Device Product Recall Research Overview” presented to Dr. Jeffrey Shuren, Director of the Center for Device and Radiological Health, FDA, with R. Shah (Apr 2014).
32. *Food and Drug Administration, White Oak, MD.* “Medical Device Product Recall Research Overview” presented to Ann Ferriter, Director of Division of Analysis and Program Operations, FDA, with R. Shah (Nov 2013).
33. *University of Pennsylvania, Wharton School of Business, Empirical Workshop.* “Plant Operations and Product Recalls in the Automotive Industry: An Empirical Investigation,” with R. Shah and S. Netessine (Oct 2013).
34. *University of Michigan, Ross School of Business, Behavioral Operations Conference.* “Behavioral Biases and the Product Recall Decision,” with R. Shah and K. Donohue (June 2013).

TEACHING

Instructor, Kelley School of Business, Indiana University

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| 1. Honors I-Core Operations Management
<i>200 undergraduate students</i> | 2020 |
| 2. PhD Operations Management Empirical Research Seminar
<i>2 doctoral students</i> | 2020 |
| 3. Honors I-Core Operations Management
<i>171 undergraduate students</i> | 2019 |
| 4. Kelley Direct Data Analytics-Product Recall seminar
<i>40 graduate students</i> | 2019 |
| 5. MS Information Systems-Operations Management Jumpstart
<i>40 graduate students</i> | 2019 |
| 6. PhD Operations Management Empirical Research Seminar
<i>2 doctoral students</i> | 2018 |
| 7. Kelley Direct Data Analytics-Product Recall seminar
<i>40 graduate students</i> | 2019 |
| 8. Honors I-Core Operations Management
<i>164 undergraduate students</i> | 2018 |
| 9. Honors I-Core Operations Management | 2017 |

- 161 undergraduate students*
10. PhD Operations Management Empirical Research Seminar
2016
- 2 doctoral students*
10. Honors I-Core Operations Management 2016
207 undergraduate students
11. Honors I-Core Operations Management 2015
171 undergraduate students

HONORS and AWARDS

1. Alpha Kappa Psi Teaching Excellence Award, Kelley School of Business 2021
2. Outstanding Junior Faculty Award Winner, Indiana University 2019
3. Jack Meredith Best Paper Award, *Journal of Operations Management* 2019
4. Distinguished Service Award for *Management Science* reviews 2019
5. Alpha Kappa Psi Teaching Excellence Award, Kelley School of Business 2019
6. Trustee Teaching Award, Indiana University 2018
7. Alpha Kappa Psi Teaching Excellence Award, Kelley School of Business 2017
8. Trustee Teaching Award Finalist, Indiana University 2017
9. Alpha Kappa Psi Teaching Excellence Award, Kelley School of Business 2016
10. Trustee Teaching Award Finalist, Indiana University 2016
11. Kristy Cua Doctoral Student Excellence Award and Fellowship 2014
12. Carlson School Doctoral Dissertation Fellowship 2013
13. Roger and Marlene Schroeder Doctoral Research Grant 2013
14. Carlson School PhD Student Teaching Award 2013
15. Best Presentation Award, Carlson School Multi-disciplinary Research Summit 2013
16. Roger and Marlene Schroeder PhD Student First Year Paper Award 2012

SERVICE

1. Associate Editor, *Journal of Operations Management* 2021-Present
 2. Special Interest Group (SIG) Co-Chair, MSOM Healthcare Operations Management 2021
 3. Session Chair at POMs Annual Conference 2018
 4. Reviewer: *Management Science*, MSOM, POMs, JOM, *Decision Sciences* 2012-2020
 5. Undergraduate honors student senior theses advisor 2016-2018
 6. Faculty advisor for National Supply Chain Case Competition 2016-2020
 7. Session Leader at DSI Annual Conference 2016, 2018
 8. POMs Annual Conference PhD Student Consortium facilitator 2015-2016
 9. Carlson School of Management, University of Minnesota
Chair of Supply Chain Department PhD Student Group 2012-2014
Graduate Student Advisory Committee Member 2011-2014
 10. Session Chair, POMS Annual Conference 2014
 11. Reviewer, POMS Annual Conference 2013
 12. Reviewer, *Decision Sciences Institute Annual Conference* 2011, 2014
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PROFESSIONAL AFFILIATIONS

1. Institute for Operations Research and the Management Sciences (INFORMS)
 2. Manufacturing and Service Operations Management (MSOM)
 3. Production and Operations Management Society (POMS)
 4. Decision Sciences Institute (DSI)
 5. Academy of Management (AOM)
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PROFESSIONAL EXPERIENCE

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| AGA Medical Corporation, Minneapolis, MN | 2005-2010 |
| • Director of Manufacturing and Distribution | |
| Guidant Corporation, Minneapolis, MN | 1999-2005 |
| • Production Manager | |
| • Process Improvement Manager/Production Supervisor | |
| United States Navy | 1994-1999 |
| • Combat Information Center Division Officer, USS TRENTON (LPD-14) | |
| • Engineering and Operations Division Officer, USS JOHN S MCCAIN (DDG-56) | |
| • Military Awards | |
| ○ Navy and Marine Corps Achievement Medal (Operation Destined Glory) | |
| ○ National Defense Service Medal (Persian Gulf War) | |
| ○ Armed Forces Service Medal (Operation Joint Guard) | |
| ○ Armed Forces Expeditionary Medal (Operation Southern Watch) | |
| ○ Navy Sea Service Deployment Ribbon (Persian Gulf and Mediterranean Sea) | |