Full text available at: http://dx.doi.org/10.1561/0200000107

Supply Chain Transparency and Sustainability

Other titles in Foundations and Trends $^{\footnotesize @}$ in Technology, Information and Operations Management

Intervention-based Research in Operations Management Aravind Chandrasekaran, Rogelio Oliva and Fabrizio Salvador ISBN: 978-1-63828-224-2

 $Sequential\ Decision\ Analytics\ and\ Modeling:\ Modeling\ with\ Python$

Warren B. Powell

ISBN: 978-1-63828-082-8

The Interface of Finance, Operations, and Risk Management Volodymyr Babich and John R. Birge

ISBN: 978-1-68083-796-4

AI and Business Models: The Good, The Bad and The Ugly

Vania Sena and Manuela Nocker

ISBN: 978-1-68083-794-0

The Business of Electric Vehicles: A Platform Perspective Jonas Boehm, Hemant K. Bhargava and Geoffrey G. Parker

ISBN: 978-1-68083-762-9

Supply Chain Transparency and Sustainability

Tim Kraft

North Carolina State University tckraft@ncsu.edu

Junhao Vincent Yu

Miami University vincentyu@miamioh.edu

Yanchong Zheng

Massachusetts Institute of Technology yanchong@mit.edu



Foundations and Trends® in Technology, Information and Operations Management

Published, sold and distributed by: now Publishers Inc. PO Box 1024 Hanover, MA 02339 United States Tel. +1-781-985-4510 www.nowpublishers.com sales@nowpublishers.com

Outside North America: now Publishers Inc. PO Box 179 2600 AD Delft The Netherlands Tel. +31-6-51115274

The preferred citation for this publication is

T. Kraft and J. V. Yu and Y. Zheng. Supply Chain Transparency and Sustainability. Foundations and Trends[®] in Technology, Information and Operations Management, vol. 17, no. 2, pp. 82–154, 2023.

ISBN: 978-1-63828-279-2

© 2023 T. Kraft and J. V. Yu and Y. Zheng

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, photocopying, recording or otherwise, without prior written permission of the publishers.

Photocopying. In the USA: This journal is registered at the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by now Publishers Inc for users registered with the Copyright Clearance Center (CCC). The 'services' for users can be found on the internet at: www.copyright.com

For those organizations that have been granted a photocopy license, a separate system of payment has been arranged. Authorization does not extend to other kinds of copying, such as that for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. In the rest of the world: Permission to photocopy must be obtained from the copyright owner. Please apply to now Publishers Inc., PO Box 1024, Hanover, MA 02339, USA; Tel. +1 781 871 0245; www.nowpublishers.com; sales@nowpublishers.com

now Publishers Inc. has an exclusive license to publish this material worldwide. Permission to use this content must be obtained from the copyright license holder. Please apply to now Publishers, PO Box 179, 2600 AD Delft, The Netherlands, www.nowpublishers.com; e-mail: sales@nowpublishers.com

Foundations and Trends[®] in Technology, Information and Operations Management

Volume 17, Issue 2, 2023

Editorial Board

Editor-in-Chief

Panos Kouvelis Washington University St. Louis USA

Editors

Charles Corbett *UCLA*, *USA*

Uday Karmarkar *UCLA*, *USA*

Editors

Onur Bayabatli $Singapore\ Management\ University,\ Singapore$

Li Chen Cornell University, USA

Nesim Erkip Bilkent University, Turkey

Jan Fransoo Tilburg University, The Netherlands

Bardia Kamrad Georgetown University, USA

Chuck Munson
Washington State University, USA

Nicholas Petruzzi University of Wisconsin, USA

Guillaume Roels INSEAD, France

Nicola Secomandi $Rice\ University,\ USA$

Full text available at: http://dx.doi.org/10.1561/0200000107

Zuo-Jun Max Shen University of California, Berkeley, USA

George Tagaras
Aristotle University of Thessaloniki, Greece

Sherri Xiaole Wu Fudan University, China

Y. Karen Zheng $MIT,\ USA$

Editorial Scope

Topics

Foundations and Trends[®] in Technology, Information and Operations Management publishes survey and tutorial articles in the following topics:

- B2B Commerce
- Business Process Engineering and Design
- Business Process Outsourcing
- Capacity Planning
- Competitive Operations
- Contracting in Supply Chains
- E-Commerce and E-Business Models
- Electronic markets, auctions and exchanges
- Enterprise Management Systems
- Facility Location
- Information Chain Structure and Competition
- International Operations
- Marketing/Manufacturing Interfaces
- Multi-location inventory theory

- New Product & Service Design
- Queuing Networks
- Reverse Logistics
- Service Logistics and Product Support
- Supply Chain Management
- Technology Management and Strategy
- Technology, Information and Operations in:
 - Automotive Industries
 - Electronics manufacturing
 - Financial Services
 - Health Care
 - Media and Entertainment
 - Process Industries
 - Retailing
 - Telecommunications

Information for Librarians

Foundations and Trends[®] in Technology, Information and Operations Management, 2023, Volume 17, 4 issues. ISSN paper version 1571-9545. ISSN online version 1571-9553. Also available as a combined paper and online subscription.

Full text available at: http://dx.doi.org/10.1561/0200000107

Contents

1	intr	oduction	3
2	Review of Experimental Research		7
	2.1	External CSR Information	10
	2.2	Product-related CSR Information	15
	2.3	Supply Chain-related CSR Information	20
	2.4	Remarks on Greenwashing	30
	2.5	Remarks on the Experimental Method and Best Practices .	31
3	Review of Model-based Research		35
	3.1	Auditing and Compliance	35
	3.2	Non-auditing Methods for Gaining Supply Chain Visibility .	42
	3.3	Disclosure of CSR Information to Stakeholders	45
	3.4	Summary of Model-based Research	51
4	Conclusions and Future Directions		54
	4.1	Future Directions for Experimental Research	54
	4.2	Future Directions for Model-based Research	57
References			59

Supply Chain Transparency and Sustainability

Tim Kraft¹, Junhao Vincent Yu² and Yanchong Zheng³

ABSTRACT

In the past few decades, social and environmental incidents in global supply chains have propelled supply chain transparency to become an increasingly important topic for firms. Multiple stakeholders, including consumers, regulators, investors, and activists, are all exerting pressures to compel or mandate firms to monitor social and environmental practices in their supply chains and disclose the related information to the public. Creating a transparent supply chain requires a firm to both gain visibility into its supply chain and disclose information to external stakeholders. Gaining visibility involves substantial investment of resources by a firm. Disclosing potentially sensitive social or environmental information comes with both risks and benefits. Because of the complexity entailed in both aspects, supply chain transparency becomes an emerging field of study for academic researchers. In this monograph, we examine and discuss the academic literature that investigates both the visibility and

Tim Kraft, Junhao Vincent Yu and Yanchong Zheng (2023), "Supply Chain Transparency and Sustainability", Foundations and Trends[®] in Technology, Information and Operations Management: Vol. 17, No. 2, pp 82–154. DOI: 10.1561/0200000107. ©2023 T. Kraft and J. V. Yu and Y. Zheng

 $^{^{1}}Poole\ College\ of\ Management,\ North\ Carolina\ State\ University,\ USA;\\ tckraft@ncsu.edu$

²Farmer School of Business, Miami University, USA; vincentyu@miamioh.edu

³Sloan School of Management, Massachusetts Institute of Technology, USA; yanchong@mit.edu

2

disclosure dimensions of supply chain transparency within the context of social and environmental responsibility. To present a clear picture of the research landscape for the operations management community, we focus our discussions on research from the behavioral and analytical modeling literature. By discussing some of the most representative and emerging studies in this space, we hope to highlight valuable research opportunities and inspire further research on the topic of supply chain transparency. 1

Introduction

In March of 2020, the Australian Strategic Policy Institute, a think tank established and partially funded by the Australian government, released a report claiming the exploitation of Uyghur and other ethnic minorities in the supply chains of well-known global companies such as Nike, Amazon, H&M, and IKEA. The companies were unaware of the issues occurring in their supply chains and caught off guard by the report. Many of the high-profile companies identified in the report were brought in front of the Business, Energy, and Industrial Strategy Committee of the United Kingdom Parliament in November of 2020 to address the claims made against them. Executives from each company addressed questions related to their levels of visibility into their supply chains and their abilities to detect modern slavery (Abdulla, 2020).

This example illustrates the pressures firms are facing to create transparent, socially and environmentally responsible supply chains. However, governments are not the only stakeholders demanding firms to become more transparent. Consumers are increasingly using their purchasing power to pressure firms to be more transparent about where and how the products they offer are being made. Nonprofits and activists

¹https://www.aspi.org.au/report/uyghurs-sale

4 Introduction

such as Fashion Revolution in the apparel industry are scrutinizing firms' efforts by grading and releasing scores that measure firms' levels of transparency. Environmental, Social, and Corporate Governance (ESG) investors are also demanding greater transparency from firms (Norton, 2019). Given the rapid growth that is occurring in ESG investing—by 2026, \$1 in every \$5 invested globally is projected to be ESG based (Michelson, 2022)—the investment community has quickly become an influential force for driving greater transparency in industries as related to social and environmental performance.

Creating a transparent supply chain requires a firm to both (i) gain visibility into its supply chain and (ii) disclose information to external stakeholders. Gaining visibility takes an extensive level of effort and investment of resources by a firm (Doorey, 2011). Disclosing potentially sensitive social or environmental information to stakeholders comes with both risks and benefits. Both dimensions involve a number of complex questions that firms must address. It is because of this complexity that supply chain transparency has become an emerging field of study for academic researchers. In this monograph, we examine and discuss academic literature that investigates both the visibility and disclosure dimensions of supply chain transparency within the context of social and environmental responsibility. In order to present a clear picture of the research landscape for the operations management (OM) community, we focus our discussions on works from the behavioral and analytical modeling literature. Our intent is not to provide an exhaustive review of the related literature. Instead, our primary goal is to discuss some of the most representative and emerging studies in this space, so as to highlight future research directions and inspire more research on supply chain transparency. To streamline the discussion, throughout the monograph, we use the terms "sustainability," "social and environmental responsibility," and "corporate social responsibility (CSR)" interchangeably. We also remark that while supply chain transparency is a topic of relevance for many management contexts, we particularly focus on its role in the context of sustainability in this monograph.

²https://www.fashionrevolution.org/about/transparency/

5

The remainder of this monograph is organized as follows. First, we provide a brief background on the topic of supply chain transparency. We then review the behavioral literature on supply chain transparency. This is then followed by a review of the analytical modeling literature that examines transparency-related contexts. Finally, we conclude the monograph by discussing potential future research directions.

A Brief History of Supply Chain Transparency: The rapid globalization of supply chains at the end of the twentieth century resulted in supply chain transparency becoming a top-of-mind issue for many industries. The level of transparency demonstrated by firms has continued to evolve over the last three decades with major high-profile incidents serving as reminders that there is still considerable work to be done for supply chains to truly become transparent. For example, one of the first realizations that greater transparency is needed in supply chains occurred in the 1990s with child labor incidents discovered in the supply chain of a Kathie Lee Gifford clothing brand sold at Walmart and in the supply chain of Nike (Epstein-Reeves, 2010). Both incidents exposed the unforeseen risks and dangers of globalization, and they highlighted the need for greater transparency. While the Kathie Lee Gifford brand was discontinued in large part because of the labor issues revealed, Nike continued to work towards improving conditions in its supply chain throughout the 1990s and into the early 2000s. In 2005, as a culmination of its efforts, Nike voluntarily disclosed its supplier list to the public (Associated Press, 2005). At the time, it was rare for well-known brands such as Nike to voluntarily disclose their supply chains (e.g., Nike was the first major apparel brand to do so). This is because before social media and the rapid evolution of the internet, companies often treated their supply chains as trade secrets that they did not want to share with the public or competitors.

While these high-profile incidents raised awareness about the potential risks of global supply chains, firms continued to struggle to monitor and ensure responsible practices in their supply chains. In the early 2010s, two supply chain incidents served as harsh reminders of this lack of progress. In 2010, a string of suicides at Foxconn, a well-known supplier to consumer electronics brands such as Apple and Hewlett-Packard, highlighted the harsh working conditions still present

6 Introduction

in supply chains (Barboza, 2010). In 2013, the Rana Plaza factory collapse in Bangladesh killed over 1,100 people.³ As part of the tragic disaster, many brands were surprised to find their apparel products had been illegally subcontracted to the factory that collapsed. These tragedies revealed how firms still had poor visibility into their supply chains, even in the 2010s. This lack of visibility motivated a number of collaborative monitoring efforts between firms, activists, and governments. For example, after the Rana Plaza collapse, European brands established the Accord on Fire and Building Safety in Bangladesh, a legally binding agreement between brands to share the costs and the information needed to improve practices in the Bangladeshi garment and textile industry.⁴

More recently in 2020, the reports of forced Uyghur labor in the supply chains of high-profile global firms received intense scrutiny from governmental and regulatory entities (as previously discussed). In the United States, legislation was passed to ensure firms were not helping to fund forced labor in the region of question.⁵ Incidents such as this helped motivate even stronger measures in the European Union, where countries such as Germany have adopted mandatory human rights due diligence laws that require large companies to prevent, identify, and correct human rights and environmental violations within their direct suppliers' operations. 6 Increasingly, governments are introducing regulations to enhance their oversight into how firms monitor and operate their supply chains. These new requirements are ushering in a new era in which firms can no longer claim ignorance with respect to what is occurring in their supply chains. That is, supply chain transparency is no longer a nice to have, but instead, it is becoming an expectation and even a requirement for many industries.

³https://www.ilo.org/global/topics/geip/WCMS 614394/lang--en/index.htm

⁴https://bangladeshaccord.org/

⁵https://www.cbp.gov/trade/forced-labor/UFLPA

⁶http://bit.ly/germany-human-rights-laws

- Abdulla, H. (2020). "UK holds hearing on exploitation of forced labour in Xinjiang". *JustStyle*. November 5, 2020. URL: https://www.juststyle.com/news/uk-holds-hearing-on-exploitation-of-forced-labour-in-xinjiang/.
- Agrawal, V. V., A. Atasu, and K. Van Ittersum. (2015). "Remanufacturing, third-party competition, and consumers' perceived value of new products". *Management Science*. 61(1): 60–72.
- Ahmed, S., T. Kalsoom, N. Ramzan, Z. Pervez, M. Azmat, B. Zeb, and M. Ur Rehman. (2021). "Towards supply chain visibility using internet of things: A dyadic analysis review". *Sensors*. 21(12): 4158.
- Alexander, A., H. Walker, and M. Naim. (2014). "Decision theory in sustainable supply chain management: A literature review". Supply Chain Management: An International Journal. 19(5/6): 504–522.
- Allcott, H. and R. L. Sweeney. (2017). "The role of sales agents in information disclosure: evidence from a field experiment". *Management Science*. 63(1): 21–39.
- Aral, K. D., D. R. Beil, and L. N. Van Wassenhove. (2021). "Supplier sustainability assessments in total-cost auctions". *Production and Operations Management.* 30(4): 902–920.
- Arenas, D., J. M. Lozano, and L. Albareda. (2009). "The role of NGOs in CSR: Mutual perceptions among stakeholders". *Journal of Business Ethics*. 88(1): 175–197.

Associated Press. (2005). "NIKE reveals overseas factory names, locations". NBC News. April 12, 2005. URL: https://www.nbcnews.com/id/wbna7480688.

- Atmanspacher, H. and S. Maasen, eds. (2016). Reproducibility: Principles, Problems, Practices, and Prospects. Hoboken, NJ: John Wiley & Sons.
- Auger, P., P. Burke, T. M. Devinney, and J. J. Louviere. (2003). "What will consumers pay for social product features?" *Journal of Business Ethics*. 42(3): 281–304.
- Balakrishnan, R., G. B. Sprinkle, and M. G. Williamson. (2011). "Contracting benefits of corporate giving: An experimental investigation". *The Accounting Review.* 86(6): 1887–1907.
- Baldassarri, D. and M. Abascal. (2017). "Field experiments across the social sciences". *Annual Review of Sociology*. 43: 41–73.
- Ball, G., E. Siemsen, and R. Shah. (2017). "Do plant inspections predict future quality? The role of investigator experience." *Manufacturing & Service Operations Management.* 19(4): 534–550.
- Barboza, D. (2010). "After suicides, scrutiny of China's grim factories". The New York Times. June 6, 2010. URL: https://www.nytimes.com/2010/06/07/business/global/07suicide.html.
- Baron, R. M. and D. A. Kenny. (1986). "The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations". *Journal of Personality and Social Psychology*. 51(6): 1173–1182.
- Baskentli, S., S. Sen, S. Du, and C. Bhattacharya. (2019). "Consumer reactions to corporate social responsibility: The role of CSR domains". Journal of Business Research. 95: 502–513.
- Becker, G. M., M. H. DeGroot, and J. Marschak. (1964). "Measuring utility by a single-response sequential method". *Behavioral Science*. 9(3): 226–232.
- Belot, M. and M. Schröder. (2016). "The spillover effects of monitoring: A field experiment". *Management Science*. 62(1): 37–45.
- Bodó, B. (2021). "Mediated trust: A theoretical framework to address the trustworthiness of technological trust mediators". New Media & Society. 23(9): 2668–2690.

Boström, M. (2015). "Between monitoring and trust: Commitment to extended upstream responsibility". *Journal of Business Ethics*. 131(1): 239–255.

- Brown, T. J. and P. A. Dacin. (1997). "The company and the product: Corporate associations and consumer product responses". *Journal of Marketing*. 61(1): 68–84.
- Buell, R. W. and B. Kalkanci. (2021). "How transparency into internal and external responsibility initiatives influences consumer choice". *Management Science*. 67(2): 932–950.
- Caro, F., P. Chintapalli, K. Rajaram, and C. S. Tang. (2018). "Improving supplier compliance through joint and shared audits with collective penalty". *Manufacturing & Service Operations Management*. 20(2): 363–380.
- Caro, F., L. Lane, and A. Sáez de Tejada Cuenca. (2021). "Can brands claim ignorance? Unauthorized subcontracting in apparel supply chains". *Management Science*. 67(4): 2010–2028.
- Carrington, M. J., B. A. Neville, and G. J. Whitwell. (2010). "Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers". *Journal of Business Ethics*. 97: 139–158.
- Carrington, M. J., B. A. Neville, and G. J. Whitwell. (2014). "Lost in translation: Exploring the ethical consumer intention-behavior gap". *Journal of Business Research*. 67(1): 2759–2767.
- Carter, C. R. and P. L. Easton. (2011). "Sustainable supply chain management: Evolution and future directions". *International Journal of Physical Distribution & Logistics Management*. 41(1): 46–62.
- Carter, C. R. and M. M. Jennings. (2004). "The role of purchasing in corporate social responsibility: A structural equation analysis". Journal of Business Logistics. 25(1): 145–186.
- Carter, C. R., L. Kaufmann, and A. Michel. (2007). "Behavioral supply management: A taxonomy of judgment and decision-making biases". *International Journal of Physical Distribution & Logistics Management*. 37(8): 631–669.

Centobelli, P., R. Cerchione, P. Del Vecchio, E. Oropallo, and G. Secundo. (2022). "Blockchain technology for bridging trust, traceability and transparency in circular supply chain". *Information & Management.* 59(7): 103508.

- Charness, G., U. Gneezy, and M. A. Kuhn. (2012). "Experimental methods: Between-subject and within-subject design". *Journal of Economic Behavior & Organization*. 81(1): 1–8.
- Chen, J., A. Qi, and M. Dawande. (2020a). "Supplier centrality and auditing priority in socially responsible supply chains". *Manufacturing & Service Operations Management*. 22(6): 1199–1214.
- Chen, L. and H. L. Lee. (2017). "Sourcing under supplier responsibility risk: The effects of certification, audit, and contingency payment". *Management Science*. 63(9): 2795–2812.
- Chen, L., S. Yao, and K. Zhu. (2020b). "Responsible sourcing under supplier-auditor collusion". *Manufacturing & Service Operations Management*. 22(6): 1234–1250.
- Chen, S., Q. Zhang, and Y. P. Zhou. (2019). "Impact of supply chain transparency on sustainability under NGO scrutiny". *Production and Operations Management*. 28(12): 3002–3022.
- Chernev, A. and S. Blair. (2015). "Doing well by doing good: The benevolent halo of corporate social responsibility". *Journal of Consumer Research.* 41(6): 1412–1425.
- Chernev, A. and S. Blair. (2021). "When sustainability is not a liability: The halo effect of marketplace morality". *Journal of Consumer Psychology*. 31(3): 551–569.
- Cho, S. H., X. Fang, S. Tayur, and Y. Xu. (2019). "Combating child labor: Incentives and information transparency in global supply chains". *Manufacturing & Service Operations Management*. 21(3): 692–711.
- Dabholkar, P. A. (1994). "Incorporating choice into an attitudinal framework: Analyzing models of mental comparison processes". *Journal of Consumer Research*. 21(1): 100–118.
- Delmas, M. A. and V. C. Burbano. (2011). "The drivers of greenwashing". California Management Review. 54(1): 64–87.

Deutsch, M. (2010). "Life cycle cost disclosure, consumer behavior, and business implications: evidence from an online field experiment". Journal of Industrial Ecology. 14(1): 103–120.

- Devinney, T. M., P. Auger, and G. M. Eckhardt. (2010). The myth of the ethical consumer hardback with DVD. Cambridge, UK: Cambridge University Press.
- Doh, J. P. and T. R. Guay. (2006). "Corporate social responsibility, public policy, and NGO activism in Europe and the United States: An institutional-stakeholder perspective". *Journal of Management Studies*. 43(1): 47–73.
- Dong, L., I. Rashkova, and D. Shi. (2022). "Food safety audits in developing economies: Decentralization vs. centralization". *Manufacturing & Service Operations Management*. 24(6): 2797–3306.
- Donohue, K., Ö. Özer, and Y. Zheng. (2020). "Behavioral operations: Past, present, and future". *Manufacturing & Service Operations Management*. 22(1): 191–202.
- Doorey, D. J. (2011). "The transparent supply chain: From resistance to implementation at Nike and Levi-Strauss". *Journal of Business Ethics*. 103(4): 587–603.
- Drugge, M. and E. Svensson. (2021). "How to be perceived as a Sustainable Brand: Success Factors for Signaling Sustainability while Avoiding Greenwashing". *MA thesis*. KTH Royal Institute of Technology. URL: https://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-300893.
- Du, S., C. B. Bhattacharya, and S. Sen. (2010). "Maximizing business returns to corporate social responsibility (CSR): The role of CSR communication". *International Journal of Management Reviews*. 12(1): 8–19.
- Du, S. and E. T. Vieira. (2012). "Striving for legitimacy through corporate social responsibility: Insights from oil companies". *Journal of Business Ethics*. 110(4): 413–427.
- Duan, Y., C. Hofer, and J. A. Aloysius. (2021). "Consumers care and firms should too: On the benefits of disclosing supplier monitoring activities". *Journal of Operations Management*. 67(3): 360–381.

Duflo, E., R. Glennerster, and M. Kremer. (2007). "Using randomization in development economics research: A toolkit". In: ed. by T. P. Schultz and J. A. Strauss. Vol. 4. Handbook of Development Economics. Elsevier. 3895–3962.

- Eckerd, S., S. DuHadway, E. Bendoly, C. R. Carter, and L. Kaufmann. (2021). "On making experimental design choices: Discussions on the use and challenges of demand effects, incentives, deception, samples, and vignettes". *Journal of Operations Management*. 67(2): 261–275.
- Economist. (2023). "How the young spend their money". *The Economist*. January 16, 2023. URL: https://www.economist.com/business/2023/01/16/how-the-young-spend-their-money.
- Ellen, P. S., D. J. Webb, and L. A. Mohr. (2006). "Building corporate associations: Consumer attributions for corporate socially responsible programs". *Journal of the Academy of Marketing Science*. 34(2): 147–157.
- Elliott, W. B., K. E. Jackson, M. E. Peecher, and B. J. White. (2014). "The unintended effect of corporate social responsibility performance on investors' estimates of fundamental value". *The Accounting Review.* 89(1): 275–302.
- Epstein-Reeves, J. (2010). "The parents of CSR: NIKE and Kathie Lee Gifford". Forbes. June 8, 2010. URL: https://www.forbes.com/sites/csr/2010/06/08/the-parents-of-csr-nike-and-kathie-lee-gifford/?sh=3b08bd2af416.
- Fahimnia, B., M. Pournader, E. Siemsen, E. Bendoly, and C. Wang. (2019). "Behavioral operations and supply chain management—A review and literature mapping". *Decision Sciences*. 50(6): 1127—1183.
- Fang, X. and S. H. Cho. (2020). "Cooperative approaches to managing social responsibility in a market with externalities". *Manufacturing & Service Operations Management*. 22(6): 1215–1233.
- Fisher, R. J. (1993). "Social desirability bias and the validity of indirect questioning". *Journal of Consumer Research*. 20(2): 303.
- Flood, C. (2019). "ESG controversies wipe \$500bn off value of US companies". Financial Times. December 14, 2019. URL: https://on.ft.com/2ZkhAEw.

Folkes, V. S. and M. A. Kamins. (1999). "Effects of information about firms' ethical and unethical actions on consumers' attitudes". *Journal of Consumer Psychology*. 8(3): 243–259.

- Forsythe, R., J. L. Horowitz, N. E. Savin, and M. Sefton. (1994). "Fairness in simple bargaining experiments". *Games and Economic Behavior*. 6(3): 347–369.
- Freese, J., T. Rauf, and J. G. Voelkel. (2022). "Advances in transparency and reproducibility in the social sciences". *Social Science Research*. 107: 102770.
- Freitas Netto, S. V. de, M. F. F. Sobral, A. R. B. Ribeiro, and G. R. d. L. Soares. (2020). "Concepts and forms of greenwashing: A systematic review". *Environmental Sciences Europe.* 32(1): 1–12.
- Grant, S. M. (2020). "How does using a mobile device change investors' reactions to firm disclosures?" *Journal of Accounting Research*. 58(3): 741–775.
- Guo, R., H. Lee, and R. Swinney. (2016). "Responsible sourcing in supply chains". *Management Science*. 62(9): 2722–2744.
- Gupta, S. K. (2011). "Intention-to-treat concept: A review". *Perspectives in Clinical Research*. 2(3): 109–112.
- Gurzawska, A. (2020). "Towards responsible and sustainable supply chains Innovation, multi-stakeholder approach and governance". *Philosophy of Management.* 19(3): 267–295.
- Ha, A. Y., W. Shang, and Y. Wang. (2023). "Supplier audit information sharing and responsible sourcing". *Management Science*. 69(1): 308–324.
- Hardwicke, T. E., J. D. Wallach, M. C. Kidwell, T. Bendixen, S. Crüwell, and J. P. Ioannidis. (2020). "An empirical assessment of transparency and reproducibility-related research practices in the social sciences (2014–2017)". Royal Society Open Science. 7(2): 190806.
- Harman, H. H. and H. H. Harman. (1976). *Modern factor analysis*. Third edition, revised. Chicago: University of Chicago Press.
- Hartzmark, S. M. and A. B. Sussman. (2019). "Do investors value sustainability? A natural experiment examining ranking and fund flows". *The Journal of Finance*. 74(6): 2789–2837.

Hastig, G. M. and M. S. Sodhi. (2020). "Blockchain for supply chain traceability: Business requirements and critical success factors". *Production and Operations Management*. 29(4): 935–954.

- Hayes, A. F. (2022). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach. Third edition. Methodology in the Social Sciences. New York: The Guilford Press.
- Ho, T. H., N. Lim, and C. F. Camerer. (2006). "Modeling the psychology of consumer and firm behavior with behavioral economics". *Journal of Marketing Research*. 43(3): 307–331.
- Holt, C. A. and S. K. Laury. (2002). "Risk aversion and incentive effects". *American Economic Review*. 92(5): 1644–1655.
- Homburg, C., M. Stierl, and T. Bornemann. (2013). "Corporate social responsibility in business-to-business markets: How organizational customers account for supplier corporate social responsibility engagement". *Journal of Marketing*. 77(6): 54–72.
- Huang, L., J. S. Song, and R. Swinney. (2022). "Managing social responsibility in multitier supply chains". *Manufacturing & Service Operations Management*. 24(6): 2797–3306.
- Hyndman, K. and M. Embrey. (2019). "Econometrics for Experiments". In: *The Handbook of Behavioral Operations*. Ed. by K. Donohue, E. Katok, and S. Leider. Hoboken, NJ: John Wiley & Sons. 35–88.
- Ibanez, M. R. and B. R. Staats. (2019). "Behavioral Empirics and Field Experiments". In: *The Handbook of Behavioral Operations*. Ed. by K. Donohue, E. Katok, and S. Leider. Hoboken, NJ: John Wiley & Sons. 121–147.
- Ibanez, M. R. and M. W. Toffel. (2020). "How scheduling can bias quality assessment: Evidence from food-safety inspections". *Management Science*. 66(6): 2396–2416.
- Imai, K., L. Keele, and D. Tingley. (2010). "A general approach to causal mediation analysis." *Psychological Methods*. 15(4): 309.
- Joireman, J., D. Smith, R. L. Liu, and J. Arthurs. (2015). "It's all good: Corporate social responsibility reduces negative and promotes positive responses to service failures among value-aligned customers". Journal of Public Policy & Marketing. 34(1): 32–49.

Kalkanci, B. and E. L. Plambeck. (2020a). "Managing supplier social and environmental impacts with voluntary versus mandatory disclosure to investors". *Management Science*. 66(8): 3311–3328.

- Kalkanci, B. and E. L. Plambeck. (2020b). "Reveal the supplier list? A trade-off in capacity vs. responsibility". *Manufacturing & Service Operations Management*. 22(6): 1251–1267.
- Kalkanci, B., E. Ang, and E. L. Plambeck. (2016). "Strategic disclosure of social and environmental impacts in a supply chain". In: *Environmentally Responsible Supply Chains*. Ed. by A. Atasu. *Springer Series in Supply Chain Management*. 223–239.
- Karaer, Ö., T. Kraft, and P. Yalçin. (2020). "Supplier development in a multi-tier supply chain". *IISE Transactions*. 52(4): 464–477.
- Katok, E. et al. (2011). "Using laboratory experiments to build better operations management models". Foundations and Trends® in Technology, Information and Operations Management. 5(1): 1–86.
- Kim, S. H. (2015). "Time to come clean? Disclosure and inspection policies for green production". *Operations Research.* 63(1): 1–20.
- Kim, S. (2019). "The process model of corporate social responsibility (CSR) communication: CSR communication and its relationship with consumers' CSR knowledge, trust, and corporate reputation perception". *Journal of Business Ethics*. 154(4): 1143–1159.
- Kirchoff, J. F., A. Omar, and B. S. Fugate. (2016). "A behavioral theory of sustainable supply chain management decision making in non-exemplar firms". *Journal of Supply Chain Management*. 52(1): 41–65.
- Kohavi, R., D. Tang, and Y. Xu. (2020). Trustworthy online controlled experiments: A practical guide to A/B testing. Cambridge, United Kingdom; New York, NY: Cambridge University Press.
- Koschate-Fischer, N., I. V. Stefan, and W. D. Hoyer. (2012). "Willingness to pay for cause-related marketing: The impact of donation amount and moderating effects". *Journal of Marketing Research*. 49(6): 910–927.
- Kraft, T., L. Valdés, and Y. Zheng. (2020). "Motivating supplier social responsibility under incomplete visibility". *Manufacturing & Service Operations Management*. 22(6): 1268–1286.

Kraft, T. and Y. Zheng. (2021). "Supply chain transparency boosts business value". Sloan Management Review. 63(1): 34–40.

- Kraft, T., L. Valdés, and Y. Zheng. (2018). "Supply chain visibility and social responsibility: Investigating consumers' behaviors and motives". *Manufacturing & Service Operations Management*. 20(4): 617–636.
- Kraft, T., L. Valdés, and Y. Zheng. (2022). "Consumer trust in social responsibility communications: The role of supply chain visibility". *Production and Operations Management.* 31(11): 4113–4130.
- Krishna, A. and U. Rajan. (2009). "Cause marketing: spillover effects of cause-related products in a product portfolio". *Management Science*. 55(9): 1469–1485.
- Leonardi, P. M. and J. W. Treem. (2020). "Behavioral visibility: A new paradigm for organization studies in the age of digitization, digitalization, and datafication". Organization Studies. 41(12): 1601–1625.
- Lii, Y.-S. and M. Lee. (2012). "Doing right leads to doing well: When the type of CSR and reputation interact to affect consumer evaluations of the firm". *Journal of Business Ethics*. 105(1): 69–81.
- Lindsay, R., A. Kirkpatrick, and J. E. Low. (2017). "Hardly soft law: The Modern Slavery Act 2015 and the trend towards mandatory reporting on human rights". *Business Law International*. 18(1): 29–50.
- Locke, R., T. Kochan, M. Romis, and F. Qin. (2007). "Beyond corporate codes of conduct: Work organization and labour standards at Nike's suppliers". *International Labour Review*. 146(1-2): 21–37.
- Louviere, J. J., D. A. Hensher, and J. D. Swait. (2000). *Stated choice methods: Analysis and applications*. Cambridge, United Kingdom: Cambridge University Press.
- Lu, T. and B. Tomlin. (2022). "Sourcing from a self-reporting supplier: Strategic communication of social responsibility in a supply chain". Manufacturing & Service Operations Management. 24(2): 902–920.
- Luchs, M. G., R. W. Naylor, J. R. Irwin, and R. Raghunathan. (2010). "The sustainability liability: Potential negative effects of ethicality on product preference". *Journal of Marketing*. 74(5): 18–31.

Martin, P. R. and D. V. Moser. (2016). "Managers' green investment disclosures and investors' reaction". *Journal of Accounting and Economics*. 61(1): 239–254.

- Michelson, J. (2022). "ESG investing is 'soaring.' What does it mean?" Forbes. November 18, 2022. URL: https://www.forbes.com/sites/joanmichelson2/2022/11/18/esg-investing-is-soaring-what-does-it-mean/?sh=59dc2cdb51bc.
- Mollenkopf, D. A., S. T. Peinkofer, and Y. J. Chu. (2022). "Supply chain transparency: Consumer reactions to incongruent signals". *Journal of Operations Management*. 68(4): 306–327.
- Moody, J. W., L. A. Keister, and M. C. Ramos. (2022). "Reproducibility in the social sciences". *Annual Review of Sociology*. 48: 65–85.
- Moser, D. V. and P. R. Martin. (2012). "A broader perspective on corporate social responsibility research in accounting". *The Accounting Review*. 87(3): 797–806.
- Murray, K. B. and C. M. Vogel. (1997). "Using a hierarchy-of-effects approach to gauge the effectiveness of corporate social responsibility to generate goodwill toward the firm: Financial versus nonfinancial impacts". *Journal of Business Research*. 38(2): 141–159.
- Naeeni, H. S., F. Sahin, and E. P. Robinson Jr. (2022). "Socially responsible product-positioning: Impact of halo/horns spillover on product image". *European Journal of Operational Research*. URL: https://doi.org/10.1016/j.ejor.2022.11.045.
- Newman, G. E., M. Gorlin, and R. Dhar. (2014). "When going green backfires: How firm intentions shape the evaluation of socially beneficial product enhancements". *Journal of Consumer Research*. 41(3): 823–839.
- Nisbett, R. E. and T. D. Wilson. (1977). "Telling more than we can know: Verbal reports on mental processes". *Psychological Review*. 84(3): 231–259.
- Norton, L. (2019). "The trouble with Corporate Social Responsibility reports". *Barron's*. February 13, 2019. URL: https://www.barrons.com/articles/the-trouble-with-corporate-social-responsibility-reports-51550066401.

Nyilasy, G., H. Gangadharbatla, and A. Paladino. (2014). "Perceived greenwashing: The interactive effects of green advertising and corporate environmental performance on consumer reactions". *Journal of Business Ethics*. 125: 693–707.

- Open Science Collaboration. (2015). "Estimating the reproducibility of psychological science". *Science*. 349(6251): aac4716.
- Orsdemir, A., B. Hu, and V. Deshpande. (2019). "Ensuring corporate social and environmental responsibility through vertical integration and horizontal sourcing". *Manufacturing & Service Operations Management.* 21(2): 417–434.
- Pai, D.-C., C.-S. Lai, C.-J. Chiu, and C.-F. Yang. (2015). "Corporate social responsibility and brand advocacy in business-to-business market: The mediated moderating effect of attribution". *Journal of Business Ethics.* 126(4): 685–696.
- Parry, G. C., S. A. Brax, R. S. Maull, and I. C. Ng. (2016). "Operationalising IoT for reverse supply: the development of use-visibility measures". *Supply Chain Management: An International Journal*. 21(2): 228–244.
- Peloza, J. and J. Shang. (2011). "How can corporate social responsibility activities create value for stakeholders? A systematic review". Journal of the academy of Marketing Science. 39(1): 117–135.
- Petersen, L., J. Hörisch, and K. Jacobs. (2021). "Worse is worse and better doesn't matter?: The effects of favorable and unfavorable environmental information on consumers' willingness to pay". *Journal of Industrial Ecology.* 25(5): 1338–1356.
- Pierce, L. and M. W. Toffel. (2013). "The role of organizational scope and governance in strengthening private monitoring". *Organization Science*. 24(5): 1558–1584.
- Pigors, M. and B. Rockenbach. (2016). "Consumer social responsibility". Management Science. 62(11): 3123–3137.
- Pizzetti, M., L. Gatti, and P. Seele. (2021). "Firms talk, suppliers walk: Analyzing the locus of greenwashing in the blame game and introducing 'vicarious greenwashing'". *Journal of Business Ethics*. 170: 21–38.

Plambeck, E. and T. Taylor. (2016). "Supplier evasion of a buyer's audit: Implications for motivating supplier social and environmental responsibility". *Manufacturing & Service Operations Management*. 18(2): 184–197.

- Prokopets, A. (2014). "Trafficking in information: Evaluating the efficacy of the California Transparency in Supply Chains Act of 2010". Hastings International & Comparative Law Review. 37(2): 351–375.
- Reczek, R. W., J. R. Irwin, D. M. Zane, and K. R. Ehrich. (2018). "That's not how I remember it: Willfully ignorant memory for ethical product attribute information". *Journal of Consumer Research*. 45(1): 185–207.
- Richards, H. (2021). "Rethinking value: 'radical transparency' in fashion". *Continuum.* 35(6): 914–929.
- Roe, B. E. and D. R. Just. (2009). "Internal and external validity in economics research: Tradeoffs between experiments, field experiments, natural experiments, and field data". *American Journal of Agricultural Economics*. 91(5): 1266–1271.
- Rungtusanatham, M., C. Wallin, and S. Eckerd. (2011). "The vignette in a scenario-based role-playing experiment". *Journal of Supply Chain Management*. 47(3): 9–16.
- Santos, C., A. Coelho, and A. Marques. (2023). "A systematic literature review on greenwashing and its relationship to stakeholders: state of art and future research agenda". *Management Review Quarterly*: 1–25.
- SEDEX. (2013). "Going deep: The case for multi-tier transparency". URL: www.sedex.com.
- Seifert, M., K. Gangl, F. Spitzer, S. Haeckl, A. Gaudeul, E. Kirchler, and S. Palan. (2022). "Financial return and environmental impact information promotes ESG investments: Evidence from a large, incentivized online experiment". Working paper. Vienna, Austria: Institute for Advanced Studies. URL: https://ssrn.com/abstract=4294495.
- Sen, S. and C. B. Bhattacharya. (2001). "Does doing good always lead to doing better? Consumer reactions to corporate social responsibility". *Journal of Marketing Research.* 38(2): 225–243.

Sen, S., S. Du, and C. B. Bhattacharya. (2016). "Corporate social responsibility: A consumer psychology perspective". *Current Opinion in Psychology*. 10: 70–75.

- Shang, J. (2013). "The negative side of corporate social responsibility". *PhD thesis.* Simon Fraser University.
- Shea, C. T. and O. V. Hawn. (2019). "Microfoundations of corporate social responsibility and irresponsibility". *Academy of Management Journal.* 62(5): 1609–1642.
- Short, J. L. and M. W. Toffel. (2016). "The integrity of private third-party compliance monitoring". *Administrative and Regulatory Law News*. 42(1): 22–25.
- Short, J. L., M. W. Toffel, and A. R. Hugill. (2016). "Monitoring global supply chains". *Strategic Management Journal*. 37(9): 1878–1897.
- Simchi-Levi, D. (2023). "From the Editor-January 2023". Management Science. 69(1): 1–6.
- Simmons, C. J. and K. L. Becker-Olsen. (2006). "Achieving marketing objectives through social sponsorships". *Journal of Marketing*. 70(4): 154–169.
- Smith, N. C., A. J. Kimmel, and J. G. Klein. (2009). "Social contract theory and the ethics of deception in consumer research". *Journal of Consumer Psychology*. 19(3): 486–496.
- Smith, N. C., G. Palazzo, and C. Bhattacharya. (2010). "Marketing's consequences: Stakeholder marketing and supply chain corporate social responsibility issues". *Business Ethics Quarterly*. 20(4): 617–641.
- Tang, S. and J. S. Song. (2023). "Effect of guided delegation and information proximity on multitier responsible sourcing". *Manufacturing & Service Operations Management, forthcoming.*
- Treviño, L. K., G. R. Weaver, and S. J. Reynolds. (2006). "Behavioral ethics in organizations: A review". *Journal of Management*. 32(6): 951–990.
- Wang, S., P. Sun, and F. Véricourt. (2016). "Inducing environmental disclosures: A dynamic mechanism design approach". Operations Research. 64(2): 371–389.

Webb, J. (2016). "Do supply chain audits work? Dealing with deviant suppliers like a journalist". Forbes.com. URL: www.forbes.com/sites/jwebb/2016/10/26/do-supply-chains-audit-work-dealing-with-deviant-suppliers-like-a-journalist.

- Yang, Z., T. T. H. Nguyen, H. N. Nguyen, T. T. N. Nguyen, and T. T. Cao. (2020). "Greenwashing behaviours: Causes, taxonomy and consequences based on a systematic literature review". *Journal* of Business Economics and Management. 21(5): 1486–1507.
- Yoon, Y., Z. Gürhan-Canli, and N. Schwarz. (2006). "The effect of corporate social responsibility (CSR) activities on companies with bad reputations". *Journal of Consumer Psychology*. 16(4): 377–390.
- Zeithaml, V. A. (1988). "Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence". *Journal of Marketing*. 52(3): 2–22.
- Zhang, H., G. Aydin, and R. P. Parker. (2022). "Social responsibility auditing in supply chain networks". *Management Science*. 68(2): 1058–1077.
- Zhao, X., C. Wu, C. C. Chen, and Z. Zhou. (2022). "The influence of corporate social responsibility on incumbent employees: A meta-analytic investigation of the mediating and moderating mechanisms". Journal of Management. 48(1): 114–146.
- Zhao, X., J. G. Lynch Jr, and Q. Chen. (2010). "Reconsidering Baron and Kenny: Myths and truths about mediation analysis". *Journal of Consumer Research*. 37(2): 197–206.