

Jacob P. Chestnut

Cornell Peter and Stephanie Nolan School of Hotel Administration
Cornell SC Johnson College of Business
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Academic Appointments

Cornell SC Johnson College of Business, Cornell University – Ithaca, NY *July 2024-present*
Senior Lecturer, Operations, Technology & Information Management
Cornell Peter and Stephanie Nolan School of Hotel Administration
Faculty Fellow, Cornell Institute for Healthy Futures.

- Focus on large-scale quantitative instruction, instructional systems design, and **inclusive, analytics-driven education that supports diverse learning backgrounds at scale**

Cornell SC Johnson College of Business, Cornell University – Ithaca, NY *July 2019-July 2024*
Assistant Professor, Operations, Technology & Information Management
Cornell Peter and Stephanie Nolan School of Hotel Administration
Faculty Fellow, Cornell Institute for Healthy Futures.

Cornell SC Johnson College of Business, Cornell University – Ithaca, NY *July 2018- July 2019*
Acting Assistant Professor, Service Operations Management
Cornell Peter and Stephanie Nolan School of Hotel Administration

Education

University of Michigan – Ann Arbor, Michigan *August 2019*
Ph.D. in Technology and Operations, Stephen M. Ross School of Business
Thesis: *Essays on Service Operations: Doing Well by Doing Good*
Advisor: Prof. Ravi Anupindi

Berkeley, University of California – Berkeley, California *2009*
Masters of Arts (ABD), Mathematics (Summa cum Laude)

Berkeley, University of California – Berkeley, California *2007*
Bachelor of Arts, Mathematics (Summa cum Laude)

Research Interests

My research interests span the area of socially sustainable operations, and my work is informed by the observation that firms that view sustainability as an opportunity for innovation can sometimes ‘do well by doing good.’” In such situations, a self-interested actor maximizes her own outcomes (by improving profits, decreasing costs, or minimizing risk) while simultaneously creating some positive externality. While social sustainability is my primary focus, my interests encompass novel service contexts, such as law, where self-interested behavior yields positive externality.

Published Work

- [1] **Chestnut, J., Sapir, J., Swarz, E.** Enumerative properties of triangulations of spherical bundles over S^1 . **European Journal of Combinatorics**, Volume 29, No. 3, 662–671.

Completed Papers

- [1] **Chestnut, J., Anderson, C., Zhou, W (Student).** **Platform Transparency and Supplier Revenue in Agricultural Procurement Auctions**

Summary: This empirical project analyzes the impact of buyer-side transparency on the supplier revenue earned via the *Cup of Excellence* (COE), a world-wide competition and online procurement platform for smallholder specialty coffee farmers. COE consists of multiple country specific “cupping

competition” resulting in rank-ordered sets of coffee lots, which are then offered to buyers via a series of online Helmsman style auctions. While extant research has considered questions such as the impact of (i) lot size, (ii) quality, and (iii) supplier-side platform transparency on ex-post pricing, this project is different – we consider questions related to *buyer-side* platform transparency.

[2] **Chestnut, J., Adalja, A., Song, W (Student). The Impact of Specialist Versus Generalist Employee Roles on Supplier Welfare, Retail Pricing, and Firm Profit in Experiential Goods**

Summary: Bringing a good to market requires both procurement (e.g., to assess and obtain the inputs required for production) and marketing (e.g., to set retail prices) activities. This experimental project explores the impact of specialist versus generalist procurement and marketing functions on supplier welfare, retail pricing, and perceived quality. To this end, we ask “what changes, and to whose benefit (supplier or firm), when procurement and marketing are led by the same group or person?” To address this question, we conduct an incentivized laboratory experiment capturing a firm’s procurement and marketing decisions (e.g., wholesale and retail prices) under two competing operational structures: (i) a traditional structure where employs specialize in procurement or marketing, and (ii) an alternate structure where a generalist employee handles both tasks. Additionally, we consider the impact of product category (e.g., experiential versus standard goods).

[3] **Chestnut, J., Anupindi, R., Ahn, HS. Giving It Away to Increase Profits: Price Discrimination and the Effect of Free Goods**

- **Finalist 2017 Best Paper Competition**, College of Healthcare Operations Management of the Production and Operations Management Society (POMS).
- *Reject and Resubmit Journal of Marketing Research.*

[4] **Chestnut, J., Beil, D. Driving Win-Win Efficiencies for Outsourced Litigation and Other Complex Services**

[5] **Chestnut, J., Anupindi, R. Shared Supplier Capacity as a Barrier to Socially Responsible Sourcing**

Work in Progress

[6] **Chestnut, J., Anupindi, R., Gupta S. The Role of Free Customers in the Development of Internal Capabilities at Aravind Eye Hospital**

Summary: AEH exists to eradicate needless blindness and does so with mission-oriented free service. However, AEH has created brand value which makes it profitable for surgeons to have practiced there. In-person conversations with AEH surgical residents suggest that mission-oriented workers are more engaged at work and often seek out extra training opportunities, implying that money-minded and mission-oriented residents may perform differently. Using a mixture of survey-based and transaction-level data, provided by AEH, we will empirically estimate the difference in performance dependent on how new resident relate towards AEH’s mission. I will further explore the implications of these results, such as retention and capacity, for the firm.

[7] **Chestnut, J., Adalja, A., Ozanne, M. Operational Transparency and Consumer Perception of Value Creation in Agricultural Supply Chains**

Summary: In the food and beverage industry, much like markets for many other consumer goods, quality disclosure in the context of supply chain and vertical process attributes has important marketing implications, as consumers increasingly view brand choices as self-actualization and the “story” behind the product can drive consumption decisions. This research develops a lab experiment to analyze how the timing (relative to consumption) and the intensity (content engagement and detail) of quality disclosure of vertical process attributes affects consumer demand for specialty coffee. The results will uncover new insights for the literature on quality disclosure in experience goods markets, and it will provide practical insights to firms that market food and beverage products.

[8] **Chestnut, J., Adalja, A., Endara, P (Student). The Behavioral Implications of Procurement Contract Structure in Agricultural Supply Chains**

Summary: Per recent industry reports, the retail value of the U.S. coffee market is estimated at approximately \$50 billion dollars, with specialty coffee comprising nearly 55% of this value. In the specialty coffee space, retail buyers must frequently compete for access to the limited annual quantity of “beans” deemed suitable for designation as specialty coffee. Given this reality, buyers have implemented a variety of contractual structures to make their offer more enticing to coffee suppliers. One well-known mechanism being Fairtrade certification (e.g., minimum price support). This experimental project considers the behavioral impact of multiple contract structures such as (i) fixed price, (ii) variance mitigating pricing envelopes (e.g., minimum and maximum transaction prices), (iii) generosity (e.g., price premium relative to Coffee C @ futures), (iv) contract duration, (v) supplier development, and (vi) various forms of “social payments.” We investigate both the impact of contract structure on the supplier’s decision of which retail buyer’s offer to accept, and any ancillary effect on the supplier’s choice of effort during production.

[9] **Chestnut, J., Anderson, C. An Analysis of Process-Level Experimentation in Agricultural Value Chains to Alevite Farmer Poverty**

Summary: In the food and beverage industry, agricultural products frequently undergo processing steps prior to consumption. For instance, the choice of how a coffee stone is removed from its flesh is an integral step in the journey from farm to table. While any choice of method (i.e., wet, dry, semi-wet, washed, fermented, etc.) will successfully complete this process step, the resultant quality of the finished good will be quite different under each. Further, since each season’s crop is influenced by a litany of factors (some unobservable) outside a farmer’s control, the finished quality under each process can be viewed as an ex-ante random variable. Thus, an important question in this context is how much process-level experimentation a farmer should conduct prior to processing the bulk of their crop. This is particularly important in coffee value chains, as the price-per-quality curve for coffee is highly convex, which implies that insufficient experimentation acts as a natural barrier to a farmer’s ability to earn a living wage. This analytical project attempts to address this friction.

[10] **Chestnut, J., Beil, D. Using Collaboration and/or Competition to Drive Sustainable Improvements When Sourcing Complex Non-Routinized Services**

Summary: How can a buyer effectively manage a supplier when both the parties have difficulty prescribing ahead of time how the supplier’s work should be done? This is a question that buyers face when sourcing complex non-routine services. For the purposes of this project, a “complex non-routine service” consists of doing work on the buyer’s behalf which requires a nontrivial degree of creativity and/or originality on the supplier’s part. The resulting ex-ante uncertainty about how service should be performed opens the door to inefficiencies. This project explores the behavioral implications of collaboration between buyer and supplier and/or competition between suppliers as a mechanism to improve long-term efficiency when sourcing non-routine services.

[11] **Chestnut, J., Anderson, C., Chae, L (Student). The Impact of Platform Design on Bidder Behavior in Helmsman Style Auctions**

Summary: The Helmsman style auction is increasingly viewed by practitioners as the preferred auction format when selling quality differentiated items such as agricultural inputs (e.g., coffee and specialty seeds), livestock, and even property development rights. However, scant academic research exists to justify this view. This experimental project, which seeks to understand the drivers of bidder behavior, is the first in a series of works attempting to bridge the gap between literature and practice. From the auction designer’s perspective, we investigate how assortment planning can be used to maximize producer welfare (and thus platform profit). From a buyer’s perspective, leveraging partial lot substitutability, we seek to minimize procurement cost for two buyer types – type 1 models a “vanity buyer” (e.g., one who seeks market status through securing only a winning lot), while type 2 models an “aspirational buyer” (e.g., one who seeks any platform validated lot).

Graduate Student Advising

Paulina Endara (joint w/ Aaron Adalja), Nolan PhD
 Wuzhen Zhou (joint w/ Chris Anderson), Nolan MS
 Wendan Song (joint w/ Aaron Adalja), Dyson MS

2021-
 2021-2023
 2021-2023

Honors and Awards

Nolan School of Hospitality Faculty Award Sophomore Core	2023
Applied Economics and Policy Faculty Grant	2019
SHA Faculty Award Sophomore Core	2019
Finalist Best Paper Competition, College of Healthcare Operations Management of the Production and Operations Management Society (POMS)	2017
Leabo Award for Excellence in Teaching, Ross School of Business	2016
Research Fellow, Ross School of Business	2011-2017
Rackham Merit Fellow, University of Michigan	2011-2017
Chancellor's Mathematics PhD Fellow, University of California	2007-2009
Valedictorian, U.C. Berkeley Mathematics	2007
Departmental Citation, U.C. Berkeley Mathematics	2007

Invited Seminars

Indian Institute of Management Ahmedabad
Clemson, College of Business
Cornell University, School of Hotel Administration
Saint Luis University, John Cook School of Business
Southern Methodist University, Cox School of Business
Wake Forrest University, School of Business

Conference Presentations

- “Shared Supplier Capacity as a Barrier to Socially Responsible Sourcing”
- POMS 2023
 - POMS 2020
 - INFORMS 2019
 - POMS 2019, Invited Sessions BOM Track
 - INFORMS 2018, BOM Track
- “Giving It Away to Increase Profits: Price Discrimination and the Effect of Free Goods”
- POMS 2017, CHOM Best Student Paper
 - MSOM 2016
 - POMS 2016, Invited Sessions
- “Using Transparency to Manage the Sourcing of Complex Non-Routinized”
- POMS 2023
 - POMS 2019, Invited Sessions Econometric Models
 - MSOM 2017
 - MSOM 2016
 - POMS 2016, Invited Sessions

Service

Referee

- Operations Research, Manufacturing & Service Operations Management

Session Chair

- POMS 2020, Behavioral Sustainability Track

Student-Facing Service

- Faculty sponsor (incoming): student organization focused on lifestyle, inclusion, and student well-being

Teaching Experience

Cornell SC Johnson College of Business, Dyson School of Applied Economics and Management

Instructor, *AEM 3610 Introduction to Operations Management*.

2025-

Cornell Paul Rubacha Department of Real Estate

Instructor, *RE 6230 Real Estate Statistical Modeling*. 2025

Dyson School of Applied Economics and Management

Instructor, *AEM 2100 Business Statistics* (Undergraduate Core). 2024-

Dyson School of Applied Economics and Management

Instructor, *AEM 3100 Business Statistics* (Undergraduate Elective/Analytics Concentration). 2024-

Nolan School of Hotel Administration

Instructor, *HADM 2011 Hospitality Quantitative Analysis* (Undergraduate Core). 2018-

Instructor, *HADM 4385/6385 Business of Coffee* (Undergraduate/Master Elective). 2019-

- Lead instructor for large, multi-section undergraduate statistics courses
- Designed and implemented standardized instructional workflows and automated assessment systems

Instructional Innovation and Analytics Education

- Introduction to Artificial Intelligence and Analytics (BANA 5010), Summer 2025
- Integration of applied AI, analytics workflows, and responsible-use frameworks into quantitative business courses
- Professional development in AI-enabled pedagogy and inclusive course design (AAC&U, AI for Education, Online Network of Educators)

Additional Teaching Experience

Stephen M. Ross School of Business, University of Michigan

Instructor, *Operations Management* (Master of Management core) 2018

Instructor, *Operations Management* (Undergraduate core) 2015

- Teaching **Effectiveness Rating: 4.91/5.0** (class size: 87), the highest rating in the last five years

Guest Lecturer

- *Operations/Marketing Interface* (MBA elective) 2014-2016
- *Supply Chain Management* (MBA elective) 2014-2015

Teaching Assistant

- *Operations/Marketing Interface* (MBA elective) 2014-2016
- *Strategic Sourcing* (MBA elective) 2014-2015
- *Supply Chain Management* (MBA elective) 2014-2015

Media Engagements

Print

[Hotel Interactive](#) 2023

Podcast

The Hotelie Podcast 2024

Industry Experience

American Automobile Association (AAA), San Francisco, Ca 2009-2011

Data Scientist and Industrial Researcher

In this executive-facing position, I was responsible for the creation of next-generation pricing structures; the creation of predictive pricing, retention/elasticity, and target marketing models for insurance; and the creation of proprietary credit models. I leveraged skills in SAS (50,000+ lines of code) and SQL programming; large-scale statistical modeling in SAS STAT (GLM, logistic, non-linear regression models); large-scale operations research in SAS OR; and linear and quadratic programs; "Big data" on the order of 10TB or more.