

Spring 2018 OM 7083

Supply Chain Strategy and Analysis

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Class Hours: Wednesday, 6 – 9:50 PM, Lindner 220

Office Hours: Wednesdays 4:30-5:45 PM and by appointment. You are welcome to stop by my Lin 528 office anytime, but if you want to be sure that I will be available to meet you, please send me an email to make an appointment.

Course Course Pack

Materials: A course pack, with all copyrighted cases for this class, is available through Harvard Business Publishing. Two cases - Barilla and Video Vault - are listed as optional, but you must choose at least one of them. You can purchase the course pack for 25-30\$ at:

<http://cb.hbsp.harvard.edu/cbmp/access/77438913>.

Supply Chain Game Simulation

You will need to purchase access to the Supply Chain Game from Responsive Technologies. To purchase your individual code, go to <http://mgr.responsive.net/Manager/ShowClient>. The institution name is "Cincinnati"; the product is titled "Supply Chain Code for OM7083". Price is \$24 per student, payable by MasterCard, Visa, Discover or American Express cards. We will play two versions of this game – initially, with a single region, followed by the multi-region version. Details on game play are provided later in this document.

Additional Readings

Additional readings will be made available via the web on Canopy Blackboard.

Web Page: The course will utilize the Canopy Blackboard Web Page system, <https://canopy.uc.edu>
Email will be the primary means of my contacting you outside of class. Please make sure that Blackboard contains your current email address and that you check your email periodically. *Blackboard will also be used as a repository for materials used in class and for posting homework assignments. Be sure to check the Blackboard web site regularly.*

Grading	Group Case Write-ups/Presentations	40%
Policy:	Homework and Peer-graded Individual Case Summaries	15%
	Supply Chain Game Simulation	20%
	Course Project OR Final Exam	20%
	Class Participation & Group Evaluation	5%

Course Method: This course will be a mix of lectures and case discussions. **Case studies will be heavily emphasized and active discussion is expected. Most of the assignments for this class are team-based.** This semester, the individual case summaries (one-pagers) may be peer-graded. This course will also include some experiential learning activities to help illustrate concepts. The teaching philosophy is: learn-by-participating-doing-and-sharing.

You are expected to come to class fully prepared and willing to participate in class discussions. Prepared means that you have read the assignments, familiarized yourself with the presented theory from the previous class, given thought to the problems presented in the case, considered how these problems could be addressed using applications of the theory presented in this class,

and completed any assigned write-ups or problems. Your willingness and ability to contribute to class discussion and ask meaningful questions will be included in your class participation grade. Your relative contribution to your team will be included in the group evaluation score.

Case Analyses: You will be required to complete **two in-depth case analyses** for this class – in Spring 2018, the *Sport Obermeyer* and *Applichem* cases are slated for in-depth case analyses. Case analyses are to be completed in self-selected groups of **three to five students** each. The deliverable for your cases analyses will be either **an in-class presentation of ~15 minutes in length plus about ~5 minutes of Q&A or a detailed report in executive summary format** (answer key case questions as a consultant to the case protagonist; max 4 pages + appendices). In order to use class time effectively, there will be at most two case presentations for each of the Sport Obermeyer and Applichem cases. **Two teams may choose to present each of these cases in class** and must inform the instructor in advance if they are interested in case presentation. Everyone in a team must present during any in-class presentations. But it is up to your group how to divide activities and presentation duties, so long as everyone presents during at least part of a presentation. Presenting teams will submit slides from your presentation to the instructor, which can contain supplementary information (additional analysis that you did not have time to cover in your presentation). **Other teams must submit a case report.** All submissions must be made before the case is discussed in class. Note: If other teams want to do an in-class presentation, I will enable this as follows: Teams may choose to do (i) a brief presentation on any one of the other OM7083 cases and this will replace two individual summary one-pagers for all presenting members of a team or (ii) a good end-of-semester project presentation on a Supply Chain topic to complement or supplement the content of OM7083 and this can replace the final exam, or (iii) a Supply Chain Game 2 presentation – this option will be restricted to teams that do well on the Game 2 play – and this option also works like the project presentation (replaces the final).

For the in-depth case analyses, you may assume that your audience is familiar with the problem description in the case, so you should not provide a detailed repeat of the setting of the case. Each case analysis will require you to provide a **specific recommendation supported by thoughtful analysis**. You should approach these cases as if you are a consulting team tasked with determining a recommendation for the company. You will be graded based on the reasonableness of your assumptions, the insightfulness of your analysis, your proposed recommendations, and your presentation style. That is, in addition to content, clarity and presentation will count in determining your case-analysis grade, just as it counts in real life.

Each case analysis in this course will require some analytics and formulation of your suggested solution to the overall problem. You are expected to present your case analyses as if you are actually trying to get upper management to adopt your suggested solution. When presenting the case, consider what would be important and convincing for management to implement your solution. Why should management take your advice? What are the actionable recommendations? Why? What other factors should be considered in implementing your recommendations?

Individual Summaries: For most class days when a group case analysis is not due, you will be asked to provide an individual summary for a particular case or reading. These **write-ups should be a maximum of one page in length**. Specific questions will be provided to help you to think about the assigned readings and theory applications for the next class and to guide your write-up. **These assignments are designed mainly to help you organize your thoughts for the case discussion and should not take an inordinate amount of time.** If discussion is deemed useful, **you may do individual summaries in groups of at most two with one submission per group.** In Spring 2018, individual summaries on any two cases will be required. [If you submit

more than two individual summaries, I will take the best two scores.] On the day we discuss the Quad Savi case, interested students may choose to write their summary on the Zappos case, if that is of greater interest. In Spring 2017, I am experimenting with a double-blind peer-grading approach for case summaries (details will be provided via Blackboard). Alternatively, a student team can choose to do a short in-class presentation on one of the cases that other students write summaries on. The key structure of any such case presentation could include: short case synopsis, key teaching objectives / lessons learned, case analyses / recommendations. Presentations should be governed by the top-three key messages to be communicated, have the enticing flavor of a Big-Mac (or other) advertisement, and excel on content and style.

Supply Chain Game: We will be using The Supply Chain Game developed by Responsive Learning Technologies in conjunction with professors from the Kellogg School at Northwestern and the University of Chicago. The Supply Chain game is a web-based, discrete-event simulator. You will complete two assignments using this supply chain simulator. **You should participate in these assignments using the same teams as used for your group case analyses, so pick your teams carefully.**

A “**practice game**” will begin on ~Friday, March 23, details TBD (~12 PM?), preliminary data for game play will be available before the game starts. There is no write-up required for this version of the game; it is designed for you to become familiar with the game format and computer interaction. **The second Supply Chain Game (where a write-up will be required) will begin on Friday, April 6, afternoon.** The game will run for one week, 24 hours per day. Your goal is to maximize your cash standing at the end of the game.

Your overall score will be based on your **final cash standing** at the end of the game and on a **report (four-page maximum)** or a short presentation (15 minutes) that describes the actions you took and analyzes / evaluates your decisions. In Spring 2018, if there are few project presentations, two teams may choose to do an in-class presentation on the Supply Chain Game. Your report (and presentation, if any) will be graded on the use of conceptual tools from class for explaining / justifying your actions (or potential actions if you did not act wisely during the game and learned lessons by or after the game play).

You first need to register for The Supply Chain game. To purchase your individual code, go to <http://mgr.responsive.net/Manager/ShowClient>. Institution name is "Cincinnati"; product is titled "Supply Chain Code for OM 7083". The price is \$24, payable by credit card. Once you have your individual code, you can **register your team** by entering the **course access code 'uc'** and your individual purchased code: <http://op.responsive.net/sc/om7083/start.html>. You will then enter your team name and password (of your choosing).

You can **access a description of the first and second assignments**, respectively, at <http://op.responsive.net/sc/om7083/Assign1> & <http://op.responsive.net/sc/om7083/Assign2>. Once the simulation begins, students **can access their teams' game play** at <http://op.responsive.net/sc/om7083/entry.html>.

Project / Final Exam: For our end-of-course learning experience, I am offering **two choices**. If you wish, your team can do a **short course project presentation** (structured similar to the case analysis presentation). This presentation can discuss a supply chain topic that either supplements or complements the course content of OM7083. Projects describing industry practice (based on interaction with people at a company or a synthesis of relevant articles) or a synopsis of a relevant Supply Chain case or Game (including their Supply Chain Game play strategy) or teaching materials or software are acceptable. In case we are short of time, teams that already

present an in-depth case analyses in class may just submit a project report instead of a course project presentation (and I will make this report available to all on Canopy Blackboard).

Instead of the team-based course project, you may choose to take a **final exam**, details of which will be available later in the course. This final exam is likely to be quantitative in nature and include specific models / tools / methods we cover in OM7083.

To facilitate better course planning, **please inform me ASAP if your team would like to do a Course Project so we can discuss your project topic**. Course presentation teams can be different from the case analyses / SC game play teams; a shared Google document will be made available to record project presentation teams and topics. Course Project presentation dates are TBA and may be either on the Wednesday evening during the last class or during exam week; the final exam also will be administered at the end of Spring 2018, details TBD.

Academic Dishonesty: As with all Lindner College of Business efforts, this course will uphold the highest ethical standards, critical to building character. Ensuing your integrity is vital and your responsibility. LCB instructors are required to report ANY incident of academic misconduct (e.g., cheating, plagiarism) to the college review process, which could result in severe consequences, including potential dismissal from the college. For further information on Academic Misconduct or related university policies and procedures, please see the UC Code of Conduct (http://www.uc.edu/conduct/Code_of_Conduct.html). **Please be especially aware that plagiarism, in any form, including the use of case write-ups written by others, represents academic misconduct in this class. Don't pay good money to UC to cheat – it is not worth cheating for a measly course grade.** And if you cheat now, imagine what will happen when you land a high-paying job.... Heard about Ex-Chesapeake Energy Corp. CEO Aubrey McClendon or the story of MIT Associate Dean and Professor Gabriel Bitran?

Special Needs Policy: If you have any special needs related to your participation in this course, including identified visual impairment, hearing impairment, physical impairment, communication disorder, and/or specific learning disability that may influence your performance in this course, you should **meet with the instructor to arrange for reasonable provisions** to ensure an equitable opportunity to meet all the requirements of this course. At the discretion of the instructor, some accommodations may require prior approval by Disability Services.

Computer / Cell phone Usage: Computer usage in class should be restricted to school work - The use of computer programs, specifically Microsoft Excel and internet access, will be required for this course. **All computers should be put away during case discussions.** Out of respect for your fellow classmates, **please turn off (or put on vibrate) all cell phones while you are in class.**

Tentative Course Schedule:

Class	Date	Theory	Assignment	Other Readings	Due
1	Feb. 28	Module 1: Supply Chain Intro, Strategy	<i>Crocs</i> Revolutionizing an Industry Supply Chain Model Case	Article: What is the Right Supply Chain Design for Your Product?	Optional <i>Crocs</i> Individual Summary (week 2 also OK)
		Module 2: Forecasting			
2	Mar. 7	Module 1: Forecasting	<i>L.L. Bean</i> Case	Optional Time Series Forecasting, Chap 5 Chopra-Meindl	Forecasting HW Individual Summary
		Module 2: Inventory			

	Mar. 14	No class, Spring Break – work on Practice Supply Chain Game?			
3	Mar. 21	Module 1: Coordinating Inventory / Production	<i>Sport Obermeyer Case</i>		Group Case Analysis Report <i>Bring laptops to class</i>
		Module 2: Supply Chain Practice Game 1			
4	Mar. 28	Module 1: RFID in the Supply Chain	<i>Quad Wants to Become a Savi Player in Agribusiness (on Blackboard)</i>	<i>Zappos: Developing a Supply Chain for WOW! Case</i>	Individual Summary <i>Bring laptops to class</i>
		Module 2: Supply Chain Network Design			
5	Apr. 4	Module 1: Global Supply Chain Opns.	<i>Applichem Case</i>	<i>McPhee: Out in the Sort (on Bboard)</i>	Group Case Analysis Report
		Module 2: Logistics			
	Apr. 7	Supply Chain Game 2 Begins, 12:00PM?			
6	Apr. 11	Module 1: Supply Chain Coordination	<i>Video Vault Case OR Barilla SpA Case</i>		Individual Summary <i>Bring laptops to class</i>
		Module 2: Supply Chain Game			
	Apr. 14	Supply Chain Game 2 Completes			
7	Apr. 18	Course Review, Supply Chain Game Reports due; Course Project Presentations / Final Exam			

Other SC Cases / Games of Interest:

Check hbsp.harvard.edu – some possibilities that could form the basis for a course project are listed at the end of this document.

Other Books of Interest:

Texts: (not required)

Supply Chain Management: Strategy, Planning, and Operation, 7th Edition, Sunil Chopra, 2018
or 6th Edition, Sunil Chopra and Peter Meindl, 2016.

Designing and Managing the Supply Chain: Concepts, Strategies, and Cases, 3rd Edition,
David Simchi-Levi, et al., 2008.

Supply Chain Science, Wally Hopp, 2008.

Quick Reads:

The Goal, Eliyahu Goldratt, 2nd Edition, 1992; *It's Not Luck*, Eliyahu Goldratt, 1994.

The Machine that Changed the World, James Womack, et al., 1991.

Clockspeed, Charles H. Fine, 1998. *The World is Flat*, Thomas Friedman, 2005.

The Wal-Mart Effect, Charles Fishman, 2006.; *The Resilient Enterprise*, Yossi Sheffi, 2005.

Travels of a T-shirt in the Global Economy, Pietra Rivoli, 2005. *The Box*, Marc Levinson, 2006.

The New Science of Retailing, Marshall Fisher and Ananth Raman, 2010.

Essentials of Supply Chain Management, Michael Hugos, 2011.

How to Measure Anything, 2nd Edition, Douglas W. Hubbard, 3rd edition 2014.

Logistics & Supply Chain Management, Martin Christopher, 2016 (5th Edition)

Course Objectives: After completing this course, students should be able to:

- Explain the effect of a supply chain on business operations
- Express familiarity with different supply chain tools (e.g., forecasting, network optimization) and understand their uses
- Model and solve “messy” supply chain problems

- Choose and apply an appropriate inventory model to improve supply chain performance
- Understand the importance of transportation and logistics in the supply chain and be familiar with ways in which transportation problems are modeled and solved
- Understand how and why companies use coordination and contracting schemes to improve supply chain performance
- Explain some of the difficulties faced by supply chains operating in a global environment
- Use Excel to solve several different supply chain operational problems
- Cite real examples of good and bad supply chain management practices from a variety of industries and be able to identify their merits and shortcomings

Basic Info. On Cases: (Further details on Canopy Blackboard; most cases are from the Harvard course pack; italicized cases – *Quad Savi* and *McPhee* – are not from Harvard)

1. **Crocs:** Plastic shoes, SC Strategy, Growth
2. **L.L. Bean:** Demand Forecasting, Inventory Stocking
3. **Sport Obermeyer:** Clothing SC; Multi-item Capacitated Production Planning under Uncertainty
4. ***Quad Savi:*** Grocery SC, RFID Technology
5. **Zappos:** Internet Retailer, Expansion, SC Core Competencies
6. **Applichen:** Chemicals SC; Multi-plant Productivity Study; Transportation Modeling
7. ***McPhee:*** Seafood, Logistics
8. **Barilla SpA:** Pasta, Vendor Managed Inventory
9. **Video Vault:** Video Inventory, SC Contracting

Other SC cases / games of potential interest (perhaps for a course project presentation, although projects could cover other topics such as SC IT / software – SAP / Oracle / JDA, Manhattan Associates, Llamasoft, Logility? – Omni-channel Retail, SC Risk / Sustainability, or companies such as P&G, Unilever).

- A. Benetton (Harvard, 1989)
- B. Ford Motor Co. – Supply Chain Strategy (Harvard, 2001)
- C. Supply Chain Management at World Co. Ltd. (Harvard, 2001)
- D. ITC eChoupal Initiative (Harvard, 2004)
- E. Exel plc--Supply Chain Management at Haus Mart (Harvard, 2005)
- F. Seven-Eleven Japan (Northwestern, 2005)
- G. Evolution of the XBOX supply chain (Stanford, 2006)
- H. Harrah's Entertainment Inc.: Real-Time CRM in a Service Supply Chain (Stanford, 2006)
- I. Zara Fast Fashion and Zara IT for Fast Fashion (Harvard, 2006)
- J. New Balance Athletic Shoe, Inc. (Harvard, 2008)
- K. Scotts Miracle-Gro: The Spreader Sourcing Decision (Ivey, 2008)
- L. Cradle-to-Cradle Design at Herman Miller: Environmental Sustainability (Harvard, 2009)
- M. RFID at the METRO Group (Harvard, 2009)
- N. Unsafe for Children: Mattel's Toy Recalls and Supply Chain Management (Stanford, 2009)
- O. VF Brands Global Supply Chain Strategy (Harvard, 2009)
- P. Half A Century of Supply Chain Management at Wal-Mart (Ivey, 2012)
- Q. Amazon.com's European Distribution Strategy (Harvard, 2013)
- R. The Dabbawala System: On-Time Delivery, Every Time (Harvard, 2013)
- S. Apple Inc.: Managing a Global Supply Chain (Ivey, 2014)
- T. Wal-Mart China Supply Chain Transformation (Ivey, 2015)
- U. Global Supply Chain Management Simulation Game V2 (Harvard, 2016),
<https://cb.hbsp.harvard.edu/cbmp/product/8623-HTML-ENG?elqTrackId=504c093c17a64873ba35d7806d6e77f3&elqaid=81&elqat=2>