

January 3, 2024

The Wharton School
University of Pennsylvania

Quarter III
Spring 2024

OID 673 Global Supply Chain Management
Monday/Wednesday 8:30am-10:00am and 10:15am-11:45am
Room SHDH 107

Course Outline and Assignments

Instructor

Professor Santiago Gallino
OID Department
Office: 573 Jon M. Huntsman Hall
sgallino@wharton.upenn.edu
Office Hours: By appointment

Course TAs

Borja Apaolaza Emparanza
apaolaza@wharton.upenn.edu
Office Hours: By appointment

Andy Vargas
andyv@wharton.upenn.edu
Office Hours: By appointment

As the boundaries between nations blur with the opening of global markets and revolutionary advancements in information technology slashing communication costs, the landscape of manufacturing, outsourcing, and offshoring is undergoing rapid evolution. Companies are increasingly challenged with critical decisions regarding their production strategies: determining the balance between in-house production and outsourcing, as well as orchestrating extensive supply chains that stretch across continents to meet the diverse demands of a globalized market.

In this business climate, companies must skillfully construct tailored business processes for distinct markets—innovative retail strategies, bespoke marketing initiatives, and localized offerings, all while managing complex manufacturing and logistics. Imagine launching a product that's conceived in the U.S., designed in Asia, assembled in China, and delivered globally with seamless precision via a local distributor to get the product through the local channel and to customers. This is the reality of today's global supply chain management.

In this course, you will be immersed in pressing questions of design, production, location, and logistics:

- How to balance in-house activities with outsourcing?
- What's the optimal global footprint for your operations?
- Can you predict and adapt to economic shifts, regulatory changes, and political upheavals?
- How do you maintain agility in your supply chain to respond to these dynamics?
- What strategies ensure effective management of widespread operations, emphasizing cost-efficiency, quality, and ethical practices?
- How do global political and economic scenarios influence your supply chain decisions?
- What's the impact of major global events, like Brexit or U.S. tariffs, on your strategy?
- How can emerging technologies like blockchain and AI unlock new potentials for your supply chain?

We will explore these themes through the lens of diverse industries, including automotive, footwear, apparel, furniture, restaurants, and toys. We will delve into the intricacies of global supply chain design and management to equip students with the knowledge to lead and innovate in this thrilling, fast-paced domain.

COURSE MATERIALS, CASES AND GUEST SPEAKERS

The course will be highly interactive, using simulations and case discussions in almost every class. We will have senior supply chain executives in a number of the class sessions. Sometimes, the guests are protagonists in the case being discussed that day and will serve as a resource during our class discussion, making remarks and answering questions for about 20-25 minutes at the end of class. Other times, the entire class will be devoted to a discussion led by the guest about their company.

Industry guests will be available for an informal lunch with a group of us. We can accommodate a small number of students at each lunch. Bios of visiting executives and a lunch sign-up will be available via our course Canvas.

GRADING

I will calculate your course score based on class participation (maximum of 3 points per session), individual write-ups of the discussion questions for designated class sessions (maximum of 10 points per write-up), and the Supply Chain Simulation and course paper (maximum of 25 points). Your resulting course score will be multiplied by the number of sessions you attended on time and divided by the total number of sessions minus 2. For example, if a student obtains 30 points on class participation, 15 points on the individual write-ups, 18 points in the final, and attends 9 sessions on time, her course score will be $58.5 = (30 + 15 + 20) * (9/10)$. The final grade for the course will be based on the distribution of the scores.

This course will follow the MBA attendance policies¹ and learning agreement². Below are a few points from these documents that are worth highlighting:

¹ <https://mba-inside.wharton.upenn.edu/wharton-mba-academic-policies/>

² <https://mba-inside.wharton.upenn.edu/mba-learning-agreement/>

- Student attendance is expected and required unless excused by the faculty or the MBA Program Office. Wharton students are admitted in part because of the experiences they bring to the community and what they can contribute to class discussions. Without consistent attendance, learning as a collaborative process cannot exist.
- Wharton's policy is that only personal illness and personal or family emergencies are excused absences. If a student needs to miss several classes for these reasons, an academic advisor will follow up with them and request documentation. Religious holidays during which classes are scheduled may be excused for observant students. Conflicts due to job interviews, career pursuits, weddings, personal and professional commitments, or travel are not appropriate reasons to request an excused absence.
- Attendance in the first few classes is a necessary condition of enrollment regardless of the student's registration status. Also, consistent attendance is required to remain enrolled or receive a passing grade in the course.

CLASS PARTICIPATION

Class participation is divided into two key areas. The first segment focuses on the essentials: you must attend punctually and remain for the entire session. Late arrivals, early departures, or interruptions during class are strongly discouraged. Unless specifically authorized, please refrain from using electronic devices. Preparation is paramount; ensure you've thoroughly read and are ready to discuss the assigned materials, bearing in mind the multiple readings required for each session.

The second segment is a qualitative evaluation of your active and meaningful engagement during discussions and your contribution to the positive dynamics of the class. While this assessment is inherently subjective, it is based on consistent observations over numerous sessions, ensuring a fair reflection of your participatory efforts. Engaging thoughtfully with the material and your peers is crucial to both your success and the enrichment of our class environment.

The development of speaking and listening skills is given a high priority in this course. The classroom should be considered a laboratory in which you can test your ability to present your analyses and recommendations clearly, convince your peers of the correctness of your approach to complex problems, and illustrate your ability to achieve the desired results through the implementation of that approach. Some of the criteria that we will use to judge effective class participation include:

- Is there a willingness to participate?
- Are comments based on insightful analysis of the case data?
- Are the points made relevant to the current discussion and linked to the comments of others?

To ensure a productive and respectful learning environment, it is crucial to adhere to a few key etiquette guidelines. First and foremost, arriving on time, ready to begin, is essential. This not only shows respect for the instructor and your peers but also minimizes disruptions during the session. Please display a name tent since this can facilitate a more interactive and personalized classroom experience. Additionally, to maintain focus and respect, turn off your phone and store it away. Should you have a personal emergency requiring you to keep your phone on, please inform the instructor before the class begins to avoid any misunderstandings.

Moreover, the use of laptops or tablets should be strictly for educational purposes and only as permitted by the instructor. This helps ensure that the technology serves as a tool for learning rather than a distraction.

Lastly, maintaining cleanliness in the classroom is a collective responsibility. It creates a welcoming learning environment and shows consideration for others who will use the space after you. By following these simple yet impactful guidelines, you contribute to a positive and effective educational setting for everyone involved.

INDIVIDUAL WRITE-UPS OF CLASS DISCUSSION QUESTIONS

Sessions indicated with an asterisk in the course schedule below are eligible for an individual hand-in write-up. These classes are case discussions for which you can submit the quiz available on Canvas corresponding to that session. The content of the quiz corresponds to the preparation questions listed for that session below.

You should submit two quizzes for the class. There is no way to “catch up” if you miss the opportunity to complete these assignments. If you wish to submit more than the required quizzes, we’ll count your best two write-ups towards your grade.

Quizzes should be submitted through the course website (in the corresponding Module section of Canvas) by 5:00am on the day of the class in which the case or subject is to be discussed (no late submissions accepted). As a reference, the sum of the word count to your responses to all the questions for a quiz should be approximately 1,500 words, and the sum of the word count should not exceed 2,000 words. This limit will be enforced, and words beyond this limit will not be graded.

Individual assignments are given grades of 1 to 10 points. You will not receive detailed and specific feedback on these individual assignments. You can discuss the cases with classmates as much as you would like, but the write-up should be your own work. Here are some considerations when you are preparing your write-ups:

- Use information from the case text and exhibits.
- In some of the cases there may have been recent developments that can give us hints about whether certain decisions were sound or not. It’s ok to reference those, but you cannot build your analysis exclusively on a future that, at the time of the case, was still unwritten.
- It is fine to complement your analysis with your own experience, but that should not be at the expense of key ideas of the case.

COURSE PAPER: THE SUPPLY CHAIN GAME

The Supply Chain Game is an online supply chain simulator and an exciting capstone to the course. Students will work in teams of 3 to build and operate a supply chain, competing against other teams in terms of maximizing profit by the end of the game. Students must forecast demand for each of five regions in order to inform their decisions on production and inventory control parameters, transportation choices, and network design decisions such as adding new factories and warehouses or increasing factory capacity. The simulator runs for about 7.5 days (2 years of simulated time), and students can observe actual demand as the game progresses and modify decisions accordingly throughout the game. Detailed assignment information will be posted on Canvas.

In addition to developing a strategy and playing the Supply Chain Game, each team is required to submit a written report addressing the questions below. The majority of your team's grade will be based on the content of this report – rather than your performance in the game – so please take the time to be detailed and clear with your responses.

1. Describe your team's strategy – including each of the decisions you made and why you made them – and how your strategy may have changed throughout the game.
2. In retrospect, would you have done anything differently to improve your performance? If so, what?

Here are some report guidelines:

- Reports that are between 5-10 pages, including figures and tables, tend to be detailed enough to answer the above questions.
- One format suggestion is to divide your report into three sections: (i) initial strategy, (ii) strategy adjustments made during the game, and (iii) strategy changes if you were to play the game again.
- You could include subsections for each decision or group of decisions. Note that different teams may have very different responses (and therefore, length of responses) in each section; for example, a team that performs very well in the game may not have much to write in section (iii).

Each team is responsible for submitting one report via Canvas by 7:00 AM on February 26. No late submissions can be accepted, as we will be discussing the game in class on February 26. I strongly recommend starting the report writing process early; you may even choose to write about your initial strategy before the game begins.

Important dates for the Supply Chain Game and course paper:

- 1/24 5pm: (Optional) Students who wish to create their own teams of 3 classmates should register the team members' names by 5pm via Canvas. Students who do not specify a team will be assigned randomly to a 3-person team.
- 1/29 noon: All team assignments will be posted on Canvas with registration instructions.

- 1/31 noon: Deadline for registering teams. After all teams register, you will have access to the Supply Chain Game interface and historical data to help you prepare for the game. It is strongly encouraging that you start planning and deciding on your strategy.
- 2/16 8am: Supply Chain Game begins! You'll likely want one team member to log in at this time to implement your initial decisions for the game. Since you would have prepared the previous week, this implementation will likely take only 5-10 minutes.
- 2/16 8am through 2/23 ~5pm: The Supply Chain Game is live! You have the ability to monitor your team's performance and adjust your supply chain decisions over the 2-year simulated game; each simulated day is approximately 14 minutes, so this is equivalent to about 7.5 days. It will likely be helpful to meet with your team at least every 1-2 days during this period to determine if/how you'd like to adjust your strategy.
- 2/26 7 am: Supply Chain Game report is due. Each team is responsible for submitting one report via Canvas. No late submissions can be accepted, as we will be discussing the game in class that day.

Date	Class	Topic & Cases	Guest(s)
17 Jan	1*	Introduction to the Course Crocs - Creating and Leveraging a Flexible Supply Chain	
22 Jan	2	Supply Chain Coordination: Bring Laptop to Class Supply Chain Management Simulation: Root Beer Game	
24 Jan	3	Supply Chain Coordination Barrilla & Root Beer Game Debrief	
29 Jan	4*	Supply Chain Innovation Kitopi: The Brave New World of Cloud Kitchens	Sanjay Khetan & Peyton Peters, Wonder
31 Jan	5*	Designing a Sustainable Supply Chain Patagonia	Doug Freeman, Patagonia
5 Feb	6	Rethinking a Global Supply Chain Strategy Tesla Motors in 2021: Competition Revs Up	Pablo Di Si, Volkswagen.
7 Feb	7*	Supply Chain Disruptions Nissan's Response to the COVID-19 Pandemic	
12 Feb	8	Supply Chain Innovation VF Brands: Global Supply Chain Strategy	Edwin Keh, The Hong Kong Research Institute of Textiles and Apparel
14 Feb	9*	Supply Chain Compliance Global Sourcing at Nike	Duncan Scott, New Balance
19 Feb	10*	Designing and Managing Supply Chains Unsafe for Children: Mattel's Toy Recalls	
21 Feb	11*	Nearshoring vs Offshoring Fuyao Glass America: Sourcing Decision	
26 Feb	12	Course Wrap Up Global Supply Chain Management Simulation - Debrief	

* Candidate for individual write-up