

THE UNIVERSITY OF SOUTHERN CALIFORNIA
Marshall School of Business
DSO 506 (16299) – Sourcing and Supplier Management – Fall 2014

Time:	Wednesdays, 5:00-8:00 pm	Room:	BRI202
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Office hours:	Wednesday, 2:00-3:00 pm Thursday, 2:00-3:00 pm		

COURSE SCOPE AND OBJECTIVES

In today's increasingly competitive and globalized world, firms are continuously trying to find ways to improve their performance and differentiate themselves from their rivals. Clearly, suppliers can have great impact on a firm's total cost and help in this differentiation process. Increased levels of outsourcing and offshoring make correct selection of suppliers and their quality, along with development of relationships between suppliers and producers, more crucial than ever.

This course aims to provide students with an understanding of the impact that sourcing and supply management have on the success and profitability of firms in today's business environment. We will look at some of the factors that need to be considered when making sourcing and supplier management decisions (costs, prices, ethics, globalization, risks), and discuss the influence that sourcing and supply management have on other functional activities, such as product design, inventory management, etc.

The class format includes lectures, case discussions, simulations, and movie clips.

COURSE MATERIALS

Required: *Course Reader (CR) – Package of cases and readings available at USC bookstore. In the syllabus, a number such as CR#5 refers to 5th article in sequence in the course reader.*

Handouts (HO): Handouts posted on the Blackboard.

Optional:

- ❖ *Purchasing and Supply Management* by Johnson, Leenders, Flynn (JLF), McGraw-Hill/Irwin, 2011.
- ❖ *Purchasing and Supply Chain Management* by Monczka, Handfield, Giunipero, Patterson (MHGP), South-Western, 2011.
- ❖ *The Promise and Limits of Private Power* by Locke, Cambridge University Press, 2013.

COURSE POLICIES

This course covers both quantitative and qualitative materials, and uses cases for discussion of issues and illustration of approaches. We will use Excel as a modeling/solution finding tool when addressing several topics. Active participation in class is important throughout the course. To ensure everyone's participation, I may at times resort to cold calling.

You should arrive to classroom on time. If you have conflicting schedules that prevent you from that, please let me know at the beginning of the semester.

GRADING

Group case reports (2)	35%
Individual submissions (5 out of 7)	10%
Group simulation project	15%
Exam	30%
Class participation	10%

GROUP CASE REPORTS

Please form teams of up four persons within the first two weeks; you will be working in these teams for the case write-ups. You should use the “Group” option on the Blackboard to join one of the teams.

The cases are to be discussed within your team and you will submit (as a team) a written report. This Syllabus provides some suggested questions that you should address in your analysis. Each team is required to submit a report on two case studies (PQI in week 3, and Polaris in week 4). Case write-ups should be at most 4 pages and single-spaced (11 or 12 point font), with appendices attached (not included in the number of pages). They should be submitted on-line through the Blackboard.

Imagine that you, as a consultant, have to study an organization, to identify the main issues it faces, and to propose a set of recommendations. Your written report should begin with an executive summary, about half page long, summarizing the most important problems and your recommendations. The rest of the report should be organized as follows:

1. Brief description of the company and its environment
2. Brief description of the problems and issues to be addressed (the questions in the syllabus related to the specific case should guide you in identifying those issues).
3. Recommendations and implementation plan.
4. Analysis that discusses why the recommendations will solve the problems identified.

You may choose to organize the report differently; however, please ensure that the above aspects are covered and the report is well organized with clear section and sub-section headers. Please avoid repetition of case facts and long expositions (remember the page limit)! Consider what you believe are the most important factors (and why). General solutions to specific problems will get you little credit. Both quantitative and qualitative analysis is important. Creativity in analysis and suggestions that are grounded in case facts will be given high credit. Please state any assumptions made clearly.

GROUP ASSIGNMENT EVALUATION

Team assignments provide a valuable learning experience – how to work effectively and efficiently in groups, learning from others, and honing your ability to communicate to others. Although your team’s grade depends on each member’s efforts, some students can be tempted to let others carry their load. In order to provide an incentive for all students to make maximum contributions to the study group, you will be asked to grade each team member’s contributions. Your group grades will be adjusted to obtain an individual grade based on feedback about performance provided by other members of the group (see the group assessment forms posted on the Blackboard). If you do not submit your group assessment form, it is assumed that you have assigned a rating of 100% to all your group members. The forms can be submitted in person or via e-mail, but no later than the exam date.

INDIVIDUAL (SHORT) SUBMISSIONS

In addition to the cases for which you are required to submit group reports, we will be discussing other cases and articles. You should be prepared for class discussion, and this Syllabus provides some

suggested questions that you should address. For the individual submissions, please prepare a short write-up answering the question(s) listed on p. 5, and submit it through the Blackboard before the class. The objective of this short submission is to ensure that you prepare the case. For that reason, no late submissions will be accepted.

Submissions should be in the form of a Word document, between one-half and one page long, font 10-12, 1.5 spacing, typed. As long as your answer shows that you have given sufficient thought to the analysis, you will get full credit. Note that this in general requires answers that are longer than one sentence (as mentioned above, at least half page).

Each submission is worth up to 2 points, and the maximum number of points you can obtain for individual submissions is 10. If your total exceeds 10 points, it can improve your participation grade (note that in this case, each additional submission does not increase your participation by 2 points).

GROUP SIMULATION PROJECT

During week 4, we will discuss global sourcing and tailored base-surge policy. This will prepare you for a global supply chain simulation project, Mexico-China Sourcing Game, that you will take part in during week 5. A spreadsheet with game description and historical order data will be posted on the Blackboard. For the simulation exercise, you should bring your laptops to class and have Safari web browser installed. With your group, before coming to class (in week 5), you should analyze the spreadsheet and decide on your global dual sourcing strategy. This includes:

1. How will you prepare yourself to start selling? (You have four periods to prime the pipeline before sales start.)
2. Will you source from both plants? Why, and if so, how much and when?
3. What is your strategic allocation? Specifically, when the orders $D(t)$ for period t are revealed, how will you react and prepare for next period: what order will you place to Mexico and what order to China? The strategic allocation is key in setting up the sourcing relationship and includes the total number of units you expect to order over the product life cycle and how the aggregate order would be allocated to each source (i.e., the % allocated to each source captures supplier shares).

You should prepare report "Simulation analysis part 1" that describes your analysis of items 1-3 above and submit it through the Blackboard before the exercise (before class on week 5). There is no restriction on report length.

After the simulation, during the remaining time of the class, we will discuss your performance and decisions. You should prepare report "Simulation analysis part 2" that describes your decisions, results, and what you learned from the exercise (that is, what, if anything, should have been done differently by your team). Report should be submitted through the Blackboard by week 6; there is no restriction on report length.

Note that the project grade depends on multiple factors, which include (but are not limited to) the quality of your analysis in part 1 and your actual performance in simulation exercise.

TEST

According to the USC Final Exam Schedule, the final exam is scheduled for **December 10, at 4:30 pm**. The questions may have several formats: multiple choice/single answer, multiple choice/multiple answers, short answer/essay, and problems. The exam will be closed book; however, you can prepare a "cheat-sheet"—one letter-sized sheet of paper hand-written on both sides (for a total of 2 hand-written pages). I will remove all printed or photocopied material!

If there are extenuating circumstances that prevent you from taking the test, you must discuss the reason with me before the time of the test. You will not be given a make-up test unless you obtain a permission from me in advance. In addition, you must be able to document the extenuating

circumstance. If you miss the test due to a medical emergency that can be documented and verified, then a make-up test will be given. Otherwise, a grade of zero will be given for the missed test. Note that a make-up test cannot be taken before the actual test date!

CLASS PARTICIPATION

Class participation requires that you do the assigned readings, analyze the cases based on the questions given and participate actively in class. I prefer substantive comments based on good analysis rather than brief, general comments that add little to the discussion and learning. Be prepared to defend your suggestions or solutions!

If you are reluctant to talk in class or if you are not physically attending, but would like to show your preparation, please provide me with your analysis/comments through email. This may include material related to the topics covered in class from your work experience, from additional articles/videos that you have found, etc.

GETTING HELP

If you have questions about any aspect of the course, you can always talk to me. If it is a quick question, you can contact me before or after the class, or during the break. If you need more time or privacy, you can come to my office hours. If you cannot make my office hours, you can contact me and we can arrange for an alternative time. The best way to reach me is by e-mail.

RETURN OF PAPERS

Graded paperwork that is unclaimed by a student will be discarded after 4 weeks. Students who miss class sessions when paperwork is returned are responsible for arranging for an appointment to retrieve the material. Disputes over graded material should be brought to my attention as soon as possible.

NOTICE ON ACADEMIC INTEGRITY

The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tensions accompanying examinations. Where a clear violation has occurred, however, the instructor may disqualify the student's work as unacceptable and assign a failing mark on the paper.

Academic dishonesty includes: (*Faculty Handbook*, 1994: 21-22):

- Examination behavior - any use of external assistance during an examination shall be considered academically dishonest unless expressly permitted by the teacher.
- Plagiarism - the appropriation and subsequent passing off of another's ideas or words as one's own. If the words or ideas of another are used, acknowledgment of the original source must be made through recognized referencing practices.
- Other types of academic dishonesty - submitting a paper written by or obtained from another, using a paper in more than one class without the teacher's express permission, obtaining a copy of an examination in advance without the knowledge and consent of the teacher, changing academic records outside of normal procedures and/or petitions, using another person to complete homework assignments without the knowledge or consent of the teacher.

FOR STUDENTS WITH DISABILITIES

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

STATEMENT ON TECHNOLOGY USE

Please note that communication devices such as cell phones, smart phones, tablets, etc. capable of sending and/or receiving electronic communication and all entertainment devices are to be turned off and kept off throughout the class session. Receiving or sending communication or entertainment during class disrupts the learning environment and is rude to those around you

Course plan at a glance (tentative)

Week	Topic	Readings	Cases	Submission
1	Introduction- Purchasing and supplier management Cost analysis	How the U.S. Lost Out on iPhone Work (HO) In China, Human Costs Are Built Into an iPad (HO) Parts Supplier Delphi is Scrutinized in GM Recall (HO) JLF: Ch. 10 Price (CR#2)		Short #1 – Apple (q.1) Short #2 – GM (q.2)
2	Prices and contracts Supplier selection	JLF: Ch. 10 Price (CR#2) Option pricing model (p.6, HO)	Loren Inc. (CR #3)	Short #3 – TLC (see p.6) Short #4 – Option pricing model (q.1, see p.6)
3	Supplier selection and evaluation	MHGP: Ch. 7 Supplier evaluation and selection (CR#4)	PQI (CR#5)	Group #1 – PQI
4	Global sourcing	MHGP: Ch. 10 Worldwide sourcing (CR#6)	Polaris (CR#6)	Group #2 – Polaris
5	Global dual sourcing simulation game	Global dual sourcing simulation game (HO)		Group project - Simulation analysis part 1
6	No class - Thanksgiving			Group project - Simulation analysis part 2
7	Procurement risks Environmental and social issues	Bangladesh Fire: How Rules Went Astray (HO) A Bangladesh Factory Inspector's Day in Life (HO) Bangladesh Fire and Wal-Mart's Supplier Network (HO) Public Outrage Over Factory Conditions (HO) U.S. Retailers Offer Plan for Safety at Factories (HO) Bangladesh Inspections Find Gaps in Safety (HO)	Boeing (CR#7) IKEA (CR#8)	Short #5– Boeing (q.2) Short #6 – IKEA (q.3) Short #7–Bangladesh (q.3)

Detailed course plan

Week 1 Introduction-Purchasing and supplier management: Cost analysis

Readings:

- *How the US lost out on iPhone work* (NYT, 1/21/2012)
- *In China, Human Costs Are Built Into an iPad* (NYT, 1/25/2012)

Discussion Questions:

1. Why did Apple replace “Made in America” with “Designed by Apple in California; Assembled in China”; that is, why did they move the manufacturing portion of their operations offshore? Do you support their decision? What might be some arguments against it?
 2. What is your evaluation of Foxconn social condition policies (wages and benefits, occupational health and safety, labor and human rights)? Do they have any impact on Apple’s image? Should Apple try to influence Foxconn to change some of its policies?
 3. What should be a company’s main criteria when making business decisions? What are?
- *Parts Supplier Delphi is Scrutinized in GM Recall* (NYT, 6/24/2014)
- #### Discussion Questions:
1. What is the impact of the recent wave or recalls on GM image? On GM’s competitiveness?
 2. What is the impact of the recent wave or recalls on GM supply chain? What role does sourcing and supplier management play in this situation?
- *Purchasing and Supply Management* JLF, Ch 10 Price

Week 2 Prices and contracts: Supplier selection

Readings:

- *Purchasing and Supply Management* JLF, Ch 10 Price
- **TLC assignment:** Suppose you are a buyer for California Farms, a major US food processing company. The company uses fruit and vegetable concentrates and purees to make its products. You have to negotiate annual contract for mango pulp, which is grown and harvested in several countries. You are currently examining your contract with a long time supplier, a Pakistani grower and processor. The supplier packages the pulp, priced at \$0.43/pound, in aseptic drums, each containing 500 lb of pulp. Each 20 ft container contains 80 aseptic drums, and the ocean freight charges \$4,200 per container. Once the containers reach the port of Los Angeles, a trucking company takes them to a warehouse at a charge of \$1,300 per container. US customs charges import duties at a rate of 12.5% of the original purchase price (excluding freight charges).

Each container is warehoused in the public storage facility until needed for processing, with average storage of one month. The monthly storage charge is \$6.5/drum. In addition, the warehouse charges a one-time in/out fee of \$3.5/drum to cover its administrative costs. California Farms annual inventory carrying charge is 18.5%, applied to the purchase part of units stored in the warehouse. As California Farms pay for items only when they reach the port of Los Angeles, they do not incur inventory cost on in-transit inventory.

What is the cost per pound of mango pulp from Pakistan to the port of Los Angeles? What is the cost from dock to the warehouse? What is the total cost for California Farms before they start production? If they wanted to reduce the total cost, what might be some alternatives?

- ❖ **Option pricing model:** Cameo is a manufacturer of fashion handbags, and they introduce new model every quarter. The demand pattern they are observing for one type of their product is shown in the worksheet “Past Demand Data”. As seen from the data, demand showed a lot of uncertainty, and they are considering different options for material sourcing that would enable them to meet demand with minimal cost.

On one hand, Cameo is considering a traditional purchase contract which specifies the quantity, unit price and delivery schedule. As these parameters are determined before the actual demand is

known, it is likely that there will be a mismatch between material available and material needed. In the case of material shortage, Cameo used spot market to purchase additional quantity in the past. The prices in the spot market vary from week to week--historical data for the last year is given in worksheet "Past Spot Price Data"--and can result in much higher material cost. Cameo is now considering a new alternative--an option contract, which includes paying a reservation fee to the supplier in order to obtain the right to buy up to a reserved quantity for a predetermined unit exercise price.

For a traditional purchase contract Cameo can get the price of \$20 per unit, but it requires quantity commitment. If the actual demand is lower than expected, Cameo could salvage extra bags at \$5 per unit. If Cameo pursues the option contract, they have to pay a reservation price of \$0.75 and the exercise price of \$19.75. Additional costs of making the bag add up to \$60 per unit. Cameo is selling each bag for \$100.

- 1) What can you say about demand distribution and spot price distribution? How can they be described/approximated?
- 2) Suppose that Cameo is committing to a purchase contract of 1,000,000 units for next quarter. What is their likely profit if they do not use option contract?
- 3) Would the option contract described above improve their profitability?
- 4) If they use the option contract described above, would they benefit from changing the purchase contract quantity?

Please download the excel file for Option pricing model from the Blackboard and bring your laptops to class.

- **Case: 12-1 Loren, Inc., from Ch. 12 JLF**
Discussion Questions (Loren, Inc case):
 1. How important is price in the awarding of this contract?
 2. Does it make sense to have multiple sources for materials such as this? How important is the past record of suppliers in this case?
 3. Does the fact that this is Brent's first major contract have any bearing on the deliberations?
 4. Is the purchasing strategy of Loren consistent with its documentation to suppliers?
 5. Do you believe the one bid policy of Loren to be a wise one?
 6. What would your decision be?

Week 3 Supplier selection and evaluation

Readings:

- *Purchasing and Supply Chain Management MHGP, Ch 7 Supplier evaluation and selection*
- *PQI: Management of Suppliers (HKU case #HKU918)*
Discussion Questions:
 1. Analyze how PQI classifies its suppliers. What transaction cost and hazards are associated with each type?
 2. Analyze and comment on the biannual score sheets for the three suppliers in Exhibit 4. Based on the score sheets, what kind of action is recommended?
 3. Should PQI share its assessment with its suppliers? How would doing so impact its management of suppliers and its relationship with them?
 4. The purchasing manager had narrowed its choice of potential supplier for the rush order from the new customer to A, B and C. If you were Wang, which supplier would you recommend that the purchasing manager place the order with? Support your recommendation with analysis.

➤ **Group report on PQI due at the beginning of the class**

Week 4 Global sourcing

- *Purchasing and Supply Chain Management MHGP, Ch 10 Worldwide sourcing*
- *Polaris Industries Inc. (Kellogg case #KEL725)*

Discussion Questions:

1. Why does Polaris outsource the manufacture of most components but in-source final assembly?
2. Which manufacturing location provides Polaris with the greatest cost savings?
3. Would your recommendation change if foreign exchange rates increased or decreased by 15%?
4. Assuming all else is constant, would your recommendation change if labor rates in Mexico increased by 20% annually instead of 7.1%?
5. What other factors should Suresh Krishna and his team consider when making the manufacturing location recommendation?

➤ **Group report on Polaris due at the beginning of the class**Week 5 Global dual sourcing simulation game**(Bring your laptops to class)**➤ **Simulation analysis part 1 due at the beginning of the class**Week 6 No class – Thanksgiving➤ **Simulation analysis part 2 due 11/26**Week 7 Procurement risks: Environmental and social issues**Readings:**

- *Boeing: The fight for fasteners* (WDI case #1-428-787)

Discussion Questions:

1. What were the causes of the fastener crisis at Boeing? What effect did the 787 Dreamliner project have on fastener supply? How was the problem ignored for so long? What could Boeing have done differently to avoid the fastener crisis?
 2. *What are the key elements of the Fastener Procurement Model (FPM)? Describe the material, information, and financial flows between Boeing, fastener manufacturers and Tier-1 partners under FPM.*
 3. Evaluate FPM from the perspective of Boeing, fastener manufacturers, Tier-1 partners and other stakeholders.
 4. Critique the approach taken by Boeing in implementing FPM. What problems has Boeing encountered in rolling out the FPM?
 5. FPM is not the first time Boeing has redesigned its procurement system. What did they do in TMX? What learning can be derived from TMX for FPM?
 6. How should the value-sharing be managed? How could Boeing construct a supply chain and governance model that would consider the concerns of all involved parties (Boeing, fastener manufacturers, Tier-1 partners)?
- *IKEA's Global Sourcing Challenge: Indian Rugs and Child Labor (A)* (HBS case #9-906-414)

Discussion Questions:

1. How should Marianne Barner respond to the invitation for IKEA to have a representative appear on the upcoming broadcast of the German video program?
2. What actions should she take regarding the IKEA supply contract with Rangan Exports?

3. *What long-term strategy would you suggest she take regarding IKEA's continued operation in India? Should the company stay or should it exit? Describe the impact of such a decision and how you would manage it.*
 4. *If IKEA continues to source carpets in India, would you suggest that they:*
 - a. *Continue IKEA's own monitoring and control processes or sign-up to Rugmark?*
 - b. *Continue to focus only on eliminating the use of child labor in IKEA's SC or engage in broader action to address the root causes of child labor as Save the Children is urging?*
- *Bangladesh Fire: How Rules Went Astray (WSJ, 12/6/2012)*
 - *A Bangladesh Factory Inspector's Grueling Day in the Life (BW, 5/30/2013)*
 - *Bangladesh Fire: What Wal-Mart's Supplier Network Missed (WSJ, 12/10/2012)*
 - *Public Outrage Over Factory Conditions Spurs Labor Deal (NYT, 5/19/2013)*
 - *U.S. Retailers Offer Plan for Safety at Factories (NYT, 7/10/2013)*
 - *Bangladesh Inspections Find Gaps in Safety (NYT, 3/11/2014)*
- Discussion Questions:
1. *Who is responsible when accidents like the one in Bangladesh occur? Could it have been prevented? How should western firms approach the safety issue for factories to which they outsource their manufacturing?*
 2. *Was Wal-Mart approach to factory safety flawed? Would you have done anything differently?*
 3. *How does European approach to factory safety (the accord) differ from the American one (the alliance)? What are the pros and cons of each of them?*