SUPPLY CHAIN MANAGEMENT

IE University
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PREREQUISITES

SUBJECT DESCRIPTION

Supply chains are the way in which all goods and services are delivered to us through a series of interconnected processes often expanding through several companies. Each kind of product or service requires a different supply chain configuration.

We start the program by introducing the main concepts related to SCM, including the SCOR model, as well as Fisher's model to provide a framework for the matching of product/service type and SC type.

The correct functioning and ultimate success of a Supply Chain depends on the ability of different players to coordinate and communicate. We will use a simulation to see how this requires a joint effort and identify the high costs of independent decision making, especially those related to inventories described by the bullwhip effect.

If the simulation shows us empirically the effects of lack of SC coordination, the Barilla case will allow us to identify environmental factors that condition the effect, the challenges of implementing corrective actions and discuss possible approaches to solving the problem.

The bullwhip effect shows the shortcomings of forecasting. We will use the Sports Obermeyer case to understand how to improve production planning in a way that we can adjust and respond to demand variability.

The Supply Chain is the way a company delivers value to its customers. This is dependent on having a Supply Chain that is designed to deliver such value. We will look at two retailers that, through state-of-the-art supply chains are able not only to deliver customer value but to develop sustainable competitive advantages through their operations. One company deals with one family of products (Zappos) while the other does with several (7-11). The cases will provide great examples of the main concepts of Supply Chain design.

The two following sessions are dedicated to designing your operations to serve your Supply Chain. We will use LEGO to appreciate the importance of Postponement and Outsourcing decisions.

Industry, and therefore the Supply Chain, is changing rapidly thanks to emerging technologies such as 3D printing, data analytics and connected sensors. We will have a session on how the 4th Industrial Revolution is shaping the Supply Chain, and how it will help to support all activities we have been covering in the previous sessions.

Lastly, we will have a session that will cover many of the concepts seen previously and understand how they apply in making a company's competitiveness sustainable in time through attaining flexibility in the short term, being able to adapt to changing environments and ensuring that all the players in the supply chain, from suppliers' suppliers to customers' customers, have aligned interests. This, called Triple-A Supply Chains, closes the loop introducing companies that have based their value proposition on the design of their Supply Chain.

OBJECTIVES AND SKILLS

During this course, students will do the following:

- Understand how the various entities of a Supply Chain affect the production and delivery of goods
- Learn models and tools that will help them make better decisions
- Study how companies have used Supply Chain to get a competitive edge

METHODOLOGY

We will use a participative methodology. It is by doing that learning gets fixed in the mind of a student. Just reading the theory and cases, and attending the class in a passive way is not enough to be able to manage the main concepts that a BBA graduate needs to master. Therefore, the classes will have a strong practical orientation, aimed to build the deep knowledge that will be required in your future jobs.

An average student shoud dedicate a certain number of hours to prepare and participate in this class, that may be distributed as follows:

Teaching methodology	**Weighting**	**Estimated time a student should dedicate to prepare for and participate in**
Lectures	40.0 %	30 hours
Discussions	13.33 %	10 hours
Exercises	13.33 %	10 hours
Group work	20.0 %	15 hours
Other individual studying	13.33 %	10 hours
TOTAL	100.0 %	75 hours

PROGRAM

Students must prepare cases individually and with their teams

SESSION 1 (LIVE IN-PERSON)

Introduction

Lecture: Supply Chain Management. A Review.

We will use this session to introduce the syllabus, the rules for the class and the first concepts of Supply Chain Management, including the SCOR model.

SESSION 2 (LIVE IN-PERSON)

Lecture: Supply Chain Management (continued). A Review.

Article: What Is the Right Supply Chain for Your Products? (HBR OnPoint Enhanced Edition) (HBS 8509-PDF-ENG)

This session will be a continuation of the previous one, and include Fisher's model, that provides a framework for the matching of product/service type and Supply Chain type.

SESSION 3 (ASYNCHRONOUS)

Managing Supply and Demand through a Simulation

IE Supply Chain Simulation

Games & Simulations: IE Supply Chain Simulation (OPE090090-U-ENG-HTM)

The correct functioning and ultimate success of a Supply Chain depends on the ability of different players to coordinate and communicate.

We will use a simulation to see how this requires a joint effort and identify the high costs of independent decision making, especially those related to inventories described by the bullwhip effect.

SESSION 4 (LIVE IN-PERSON)

Managing Supply and Demand

Practical Case: Barilla SpA (A) (HBS 694046-PDF-ENG)

If the simulation shows us empirically the effects of lack of Supply Chain coordination, the Barilla case will allow us to identify environmental factors that condition the effect, the challenges of implementing corrective actions and discuss possible approaches to solving the problem.

SESSION 5 (LIVE IN-PERSON)

Ethical and/or Sustainable Supply Chains

Lecture and Discussion

Please do a Google Research on Ethical and Sustainable Supply Chains

The previous sessions will show us that Supply Chains have wastes that need to be kept under control. Although waste has strong environmental impact, it is not the only aspect to consider when trying to design an ethical or sustainable Supply Chain. What makes your Supply Chain more sustainable or ethical?

SESSION 6 (LIVE IN-PERSON)

Managing Supply and Demand for perishable products

Practical Case: Sport Obermeyer (HBS 695022-PDF-ENG)

The bullwhip effect shows the shortcomings of forecasting. We will use the Sports Obermeyer case to understand how to improve production planning in a way that we can adjust and respond to demand variability.

SESSION 7 (LIVE IN-PERSON)

Supply Chain for Internet Retail

Practical Case: Zappos.com: Developing a Supply Chain to Deliver WOW! (HBS GS65-PDF-ENG)

The Supply Chain is the way a company delivers value to its customers. This is dependent on having a Supply Chain that is designed to deliver such value. In sessions 7 and 8, We will look at two retailers that, through state-of-the-art supply chains are able not only to deliver customer value but to develop sustainable competitive advantages through their operations. One company deals with one family of products (Zappos) while the other does with several (7-11). The cases will provide great examples of the main concepts of Supply Chain design.

SESSION 8 (LIVE IN-PERSON)

SCM Strategy and Fit

Practical Case: Seven-Eleven Japan Co (HBS KEL026-PDF-ENG)

SESSION 9 (LIVE IN-PERSON)

Complexity in operations

Practical Case: Lego (HBS 613004-PDF-ENG)

Sessions 9 and 10 are dedicated to designing your operations to serve your Supply Chain. We will use LEGO to appreciate the importance of Postponement and Outsourcing decisions.

SESSION 10 (LIVE IN-PERSON)

Sourcing and outsourcing

We will use the same case (LEGO) as in the previous session.

SESSION 11 (LIVE IN-PERSON)

Supply Chain 4.0:

The Fourth Industrial Revolution and the Supply Chain.

Carry out a web search on how companies are using Data Analytics, Big Data, Internet of Things, and other Industry 4.0 practices to improve their business models.

Industry, and therefore the Supply Chain, is changing rapidly thanks to emerging technologies such as 3D printing, data analytics and connected sensors. We will have a session on how the 4th Industrial Revolution is shaping the Supply Chain, and how it will help to support all activities we have been covering in the previous sessions.

SESSION 12 (LIVE IN-PERSON)

Agility, Adaptability, and Innovation in Supply Chains

Technical note: The Triple-A Supply Chain (HBR OnPoint Enhanced Edition) (HBS 8096-PDF-ENG)

Technical note: Europe's Solution Factories (HBS R1404J-PDF-ENG)

This session will cover many of the concepts seen previously and understand how they apply in making a company's competitiveness sustainable in time through attaining flexibility in the short term, being able to adapt to changing environments and ensuring that all the players in the supply chain, from suppliers' suppliers to customers' customers, have aligned interests. This, called Triple-A Supply Chains, closes the loop introducing companies that have based their value proposition on the design of their Supply Chain.

SESSION 13 (LIVE IN-PERSON)

SCM Summary

Lecture: we will revisit the main issues learnt throughout the course

Reading: Revise your notes for the course and be ready to ask questions that may solve lingering doubts

SESSION 14 (ASYNCHRONOUS)

Project Presentation

SESSION 15 (LIVE IN-PERSON)

Final Exam

BIBLIOGRAPHY

Recommended

- Nigel Slack and Alistair Brandon-Jones. *Operations and Process Management : Principles and Practice for Strategic Impact.* ISBN 9781292176178 (Digital)

- David Simchi-Levi, Philip Kaminsky, Edith Simchi-Levi.. *Designing and managing the supply chain : concepts, strategies, and case studies.* ISBN 9780072982398 (Printed)

- Sunil Chopra, Peter Meindl, Dharam Vir Kalra.. *Supply chain management : Strategy, planning, and operation.* 6th. Pearson. ISBN 9780133800203 (Printed)

- Edmund Prater and Kim Whitehead. *An Introduction to Supply Chain Management : A Global Supply Chain Support Perspective.* Business Expert Press. ISBN 9781606493762 (Digital)

- F. Robert Jacobs, Indiana University, Richard B. Chase, University of Southern California.. *Operations and supply chain management.* ISBN 9781259666100 (Printed)

EVALUATION CRITERIA

Your final grade in the course will be based on both individual and group work of different characteristics that will be weighted in the following way:

Criteria	Percentage	Comments
Class Participation	30 %	
Group Presentation	35 %	
Final Exam	35 %	A minimum grade of 4

- It a prerequisite that you must get a minimum grade of 4 in the final exam for it to be counted for the weighted average. Students getting final exam grades below 4 will get a failing

grade in the course.

- Group project members will be asked for peer review. As a result, if some members of the group contributed more, they will get a higher grade and those who didn't lower.

RE-TAKE POLICY

Each student has four (4) chances to pass any given course distributed over two (2) consecutive academic years. Each academic year consists of two calls: one (1) ordinary call (during the semester when the course is taking place); and one (1) extraordinary call (or "re-sit") in June/July.

Students who do not comply with the 70% attendance requirement in each subject during the semester will automatically fail both calls (ordinary and extraordinary) for that Academic Year and have to re-take the course (i.e., re-enroll) during the next Academic Year.

The Extraordinary Call Evaluation criteria will be subject to the following rules:

- Students failing the course in the ordinary call (during the semester) will have to re-sit evaluation for the course in June / July (except those students who do not comply with the attendance rule, and therefore will not have that opportunity, since they will fail both calls and must directly re-enroll in the course during the next Academic Year).
- It is not permitted to change the format nor the date of the extraordinary call exams or deadlines under any circumstance. All extraordinary call evaluation dates will be announced in advance and must be taken into consideration before planning the summer (e.g. internships, trips, holidays, etc.)
- The June/July re-sit will consist of a comprehensive evaluation of the course. Your final grade for the course will depend on the performance in this exam or evaluation only. I.e., continuous evaluation over the semester (e.g. participation, quizzes, projects and/or other grade components over the semester) will not be taken into consideration on the extraordinary call. Students will have to achieve the minimum passing grade of 5 and the maximum grade will be capped at 8.0 (out of 10.0) – i.e., "notable" in the extraordinary call.
- Re-takers: Students who failed the subject on a previous Academic Year and are now re-enrolled as re-takers in a course will need to check the syllabus of the assigned professor, as well as contact the professor individually, regarding the specific evaluation criteria for them as re-takers in the course during that semester (ordinary call of that Academic Year). The maximum grade that may be obtained as a retaker during the ordinary call (i.e., the 3rd call) is 10.0 (out of 10.0).

After exams and other assessments are graded by the professor (on either the ordinary or extraordinary call), students will have a possibility to attend a review session (whether it be a final exam, a final project, or the final overall grade in a given course).
Please be available to attend the session in order to clarify any concerns you might have regarding your grade. Your professor will inform you about the time and place of the review session!

- Students failing more than 18 ECTS credits after the June/July re-sits will be asked to leave the Program. Please, make sure to prepare yourself well for the exams in order to pass your failed subjects!
- In case you decide to skip the opportunity to re-sit for an exam or evaluation during the June/July extraordinary call, you will need to enroll in that course again for the next Academic Year as a re-taker, and pay the corresponding tuition fees. As you know, students have a total of four (4) allowed calls to pass a given subject or course, in order to remain in the program.

PROFESSOR BIO

Luis Vivanco is an Adjunct Professor of Operations and Supply Chain Management at IE Business School.

He started his career as a SCM Engineer in 1989 after receiving a BSc in Industrial and Systems Engineering at Tec de Monterrey in Mexico and an MSc in Information Management from the University of Lancaster in the UK. In his role he was the in-site representative for a US range control manufacturer with their largest customer in Mexico, an alliance between GE Appliances and Mexico-s MABE, dealing with logistics, production planning and quality issues.

In 1993 he did a Master in Business Administration at the International Institute for Management Development (IMD) in Switzerland. Following his MBA he worked in several strategy and business development roles with service MNCs. In parallel, since 1996, he has collaborated in research and consulting projects in SCM with companies like LEGO, Unilever, Harley-Davidson or Philips, writing cases on the subject, including one on Numico that deserved the Best Case recognition in the SCM category in the EFMD Case Writing Competition. He was also a participant in the Value Chain 2020 Forum organized by IMD with the sponsoring of companies like Nestle, Philips, GSK, Shell, LEGO or Grundfos, among other. The Forum looked at the value chain challenges facing companies over the next decade. He is the co-author of “The Value Chain Shift”, which was published as the result of this forum.

Academic Background

- Master in Business Administration, IMD International, Switzerland
- MSc in Information Management, Lancaster University, UK
- BSc in Industrial Engineering, Tecnológico de Monterrey, Mexico
- Strategic Negotiations Program, Harvard Business School, USA

Academic Experience

- Since 1996, Research Associate (external), IMD International. Over 15 written cases on Value Chain
- Management, Strategy and Change Management. Co-Author of “The Value Chain Shift” with focus on managing resource scarcity and on corporate social responsibility through the value chain.

Corporate Experience

- Consultant on Strategic development, decision making processes and value chain management. Clients include The LEGO Group, Unilever, Sigma Alimentos (owner of Campofrio) and MABE Appliances.
- Director of Strategy and International Business at British Telecom. SCM Specialist at GE Appliances.

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OTHER INFORMATION