Course Outline

Course Code : DOS3704
Course Title : Operations Strategy
Class Date : From 11/8/2025 To 14/11/2025
Semester : Semester 1, Academic Year 2025_26
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Overview

How did ZARA become one of the fastest growing and most profitable brands in fashion retailing? How did Wal-Mart grow to be the world's largest retailer? To a large extent the answer is that ZARA and Wal-Mart view their operational capabilities as an important and integral part of their competitive advantage. As do other successful companies, such as Procter & Gamble, Toyota, and Coca Cola, they invest strategically in physical plants and facilities, in process and information technology, in employee, supplier, and distributor relationships, and perhaps most importantly, in organizational practices and know-hows.
Today's successful organizations have to delicately jungle between customers' requirements of the lowest cost, the best quality, prompt delivery and flexibility to ensure products and services of their choice. This module is structured to focus on how to achieve these multiple objectives with operations strategy. It can help students to understand that operations can create a significant competitive advantage, when matching demand with supply, through strategic choices regarding a firm's processes, technologies, capacity, location, flexibility, timing, learning and innovation.

Course Objectives

After taking this course students will be able to analyse and improve a company's operations strategy. More specifically, students will be able to:

- List and explain the range of strategic choices to be made in operations strategy
- List and explain the various links between operations and other business functions
- Analyse and describe the internal and external factors that influence strategic operational investments
- Analyse and describe the connection between operations strategy and the firm's business strategy and competitive position
- List and describe basic principles that lead to an organization's operational success
- Assess an existing operations strategy by identifying its key elements and by evaluating it qualitatively and financially
- Improve an operations strategy by analysing key drivers and decisions for each element and by developing recommendations and implementation plans

Assessment

Assessment Components	Weightage
Class participation	20% (individual score)
Group assignments	25% (group score*)
Group project	25% (group score*)
Peer evaluations	10% (individual score)
Course Test	20% (individual score)

* For group score, each student of the group will get the same score; however, I may upgrade or downgrade certain individuals in the group if there is a clear reason to do so.

Schedule and Outline

C;ass	**Session** (lesson topics, outline, readings & cases)
1	Introduction of Operations Strategy What is operations strategy? We introduce a framework to describe a company's operations strategy. The key premise is that an operations strategy must be evaluated in terms of the performance it delivers. This performance depends on the activity network and the asset bundle that operations puts in place. We will use the framework to think about operations strategy and discuss the goals of operations strategy, i.e., value maximization and alignment; and introduce analytical tools to estimate NPV. We use Mini-case 'Swiss Watch Industry' as this class's main driving vehicle. Readings: • Chapter 1: "Operations Strategy: Concept and Framework" • Swiss Watch Industry, mini-case end of Chapter 1.
2	Competencies, capabilities and Operations We start today's class by applying the contents of last week's class to the HBS case '*American Connector Company (A)*' where we describe and contrast two firms' operations strategies (i.e., ACC vs. DJC). We will introduce analytical tools to tailor operations strategy. We will then discuss how the concepts of operational trade-offs and competency focus relate to strategic positioning and operational efficiency and how they can be used - qualitatively and quantitatively - to evaluate a firm's operations strategy in a competitive setting. We use the HBS case '*American Connector Company (A)*' as this class's main driving vehicle. Readings: • Chapter 2: "Competition, Competencies and Operations" • *American Connector Company (A)*, HBS Case (No. 9-963-035)
3	Capacity size and investment In the first half of the class, we will apply trade-off curves (learned in class 2) to analyse threats faced by ACC (based on the HBS case study from class 2) using available case data. In the second half of the class, we will introduce capacity strategy, a major part of operations strategy. Capacity strategy includes deciding on the sizing, timing, type, and location of resources and assets. This class will focus on capacity sizing decisions where analytical tools, e.g. , marginal analysis, will be used to value and optimize capacity size. Readings: • Chapter 3: "Capacity Sizing and Investment"
4	Capacity timing and expansion In today's class we will study a few capacity timing strategies that a company can use to decide when to expand or contract its capacity. Capacity timing means timing of capacity adjustment. The key trade-off is

	capacity adjustment costs and the continuing costs of capacity excess or shortage. To value and optimize capacity timing, analytical tools, e.g., optional value of waiting, will be used. Readings: • Chapter 4: "Capacity Timing and Expansion"
5	Capacity types: flexibility and consolidation Once a company decides it needs to build new capacity, it must decide on what type of capacity. This involves deciding on the type of technology and facility. This class will discuss when and why product-dedicated or product-flexible technology is more appropriate. We also will explore what flexibility means and the various approaches to achieve it so to be better positioned to respond to changes in demand, supply, and processing. We will use the HBS case '*Eli Lily & Co'* as the main driving vehicle. Readings: • Chapter 5: "Capacity Types, Flexibility and Consolidation" • HBS case: Eli Lilly & Co: The Flexible Factory Decision
6	Capacity location We start the class by finishing the financial analysis on Eli Lily (week 5 HBS case). Afterwards, we will introduce capacity location decisions and describe how location strategy is part of operations strategy. For this topic, we will study a few types of location analysis tools, and discuss several network choices faced by organizations. Readings: • Chapter 6: "Capacity Location, Global Networks and Offshoring
7	Technology and innovation management Every organization must build capabilities for future growth. Such capabilities include technology and processes for new product and process development, for learning, and for building a global culture. Clearly technology offer excellent opportunities to improve the performance of operations, but operations managers need to think strategically about technology investments. In this class we will discuss the strategic role of technology in business operations. We will also study the importance of organizational learning and "the learning curve" as well as investigating the role of learning, improvements, and innovations in operations. We will use the HBS case '*Moderna'* as the main driving vehicle. Readings: • Chapter 10: "Improvement and Innovation" • HBS Case *Moderna*
8	Matching supply with Demand In this class we will discuss how to match supply with demand strategically. Topics include strategic sourcing and demand management. Several analytical tools will be discussed in matching supply with demand. Readings: • Chapter 7: Strategic Sourcing, Supply Management and Outsourcing • Chapter 8: Demand and revenue management
9	Course summary and wrap-up • Group Project proposal is due before class starting time
10	Course Test • The course test will be administered during our regular class time in our classroom location; • The course test is to be done individually; • The course test will be closed book and closed notes; • The course test will be in paper-pencil format;

	• The course test questions will relate to the class readings and the materials presented by the instructor in the class sessions; • The primary objective of the course test is that you will review and synthesize the content of the course; • You are allowed to bring in 1-page cheat sheet of 1-page, double-sided is ok.
11	• All teams are required to submit your Project Presentation Slides to Canvas before class starting time • Students' project presentations
12	• Students' project presentations
13	• Students' project presentations • Group project Executive summary is due today before 23:59 • Peer evaluation is due today before 23:59

COURSE PROCESS METHODS

Regular sessions will have lectures complemented with additional external inputs which will be in the form of cases, textbook readings and in-class discussions. Each topic of the subject will be discussed using a combination of readings, exercises, case discussions, and analytical tools and models. Theory and conceptual thinking form the backbone of the course but there will also be a strong emphasis on experiential and action-based learning through case preparations and discussions, group assignments and group project in which actual results can be expected. Each group will consist of 4 to 6 students.

GUIDELINES FOR CASE PREPARATIONS

Mini- and three HBS cases are chosen for this course to relate to contents. Chosen cases are famous classics for its relatable contents to our course contents, not the time of the case was written. For class participation credits, you need to read the assigned case for that week's class before class and be ready to elaborate and discuss the related topics and contents. In particular, use our framework to related to the assigned case. Please note, cases are long and not always very easy to comprehend so give yourself enough time to read before class time. Some cases many pose some questions and attempting to answer them can be a good way to prepare for good class participations.

GUIDELINES FOR GROUP PROJECT

YOUR GROUP MAY CHOOSE TWO TYPES:

- Type I "Case study": Identify an organization (one familiar to you or your group would work well) whose operations strategy you can analyse and improve, or
- Type II "White paper": A research-oriented paper on a specific topic in operations strategy or a novel industry practice that directly relates to operations strategy.

KEY EXPECTATIONS (APPLIES TO BOTH TYPE I AND II):

- The project has a strong operational component
- The project is interesting and has a general learning point (Aim for a project in which not only you, but also your audience, will learn something).
- The analysis uses or extends concepts discussed in class

DELIVERABLES (APPLIES TO BOTH TYPE I & II) WITH TIMELINE AND GRADING CRITERIA:

1. Before week 9 class: submit a 1-page Project Proposal (5%) that outlines,
   - Project title + indicate whether "case study" or "white paper"
   - A preliminary version of the Executive summary of the project (use placeholders/boilerplates where you do not yet have findings) using the following SCQA structure:
     - Situation (what is the background situation/context for your project)
     - Complication (what in this situation/context leads you to do your investigation)

    - Question (what is the question you will try to answer in your project)
    - Answer (a summary of the answers you have come up with in your investigation, i.e. your main findings and recommendations)
  - Relationship to class topics: specify which operations strategy topics your project will relate to
  - Timeline of project activities (this will be your project plan)
  - Group member roles
  - Optional: Contact persons at related organizations who has agreed to cooperate with project
  - Grading criteria: on time submission
2. Before week 11 class: submit your group's Project Presentation Slides (5%) and be prepared for an in-class presentation (10%), with possible Q&As from your classmates (if time allows). All group members need to present (5 minutes per member, totalling 25 minutes for a group consist of 5 members). Grading criteria include:
  - Effectiveness of the presentation by team members
  - Effectiveness of the presentation slides
  - Critical thinking displayed
  - Creativity displayed
  - Knowledge and insights displayed, as related to Operations Strategy
  - Thoroughness and comprehensiveness
  - Overall Quality: logic, structure, style, clarity, grammar, spelling, layout
3. Before week 13 class: submit your group's final version of the Executive summary (5%).
  - The Executive summary is to be no longer than 2 pages excluding exhibits (e.g., tables, charts, figures, diagrams). Start your Executive Summary with a short summary (less than 250 words) that describes the situation of the company/project, the problem/complication it is facing, the question it needs to answer and your answers/recommendations. Then support your recommendations with a detailed analysis.
  - Grading criteria include clarity, completeness, logic and structure.

MAIN TEXTBOOK and CASES:

- Operations Strategy, Principles and Practice, by Jan A. Van Mieghem. Publisher *Dynamic Ideas*.
- HBS cases below will be provided –
    - *American Connector Company (A)*
    - *Eli Lilly & Co: The Flexible Factory Decision*
    - *Moderna*

Academic Honesty & Plagiarism

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is 'the practice of taking someone else's work or ideas and passing them off as one's own' (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule - You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubts, you should consult your instructor.

Additional guidance is available at:

- Administrative Policies
- http://www.nus.edu.sg/registrar/administrative-policies-procedures/acceptance-record#NUSCodeofStudentConduct
- http://nus.edu.sg/osa/resources/code-of-student-conduct