

Course Outline

Course Code : DOS3704
Course Title : Operations Strategy
Class Date : From 13/01/2025 To 18/04/2025
Semester : Semester 2, Academic Year 2024_25
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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 juggle 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 analyze 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
- Analyze and describe the internal and external factors that influence strategic operational investments
- Analyze 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 analyzing 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, but if there is a clear reason to do so I may upgrade or downgrade certain individuals in the group)
Group project	25% (group score, but if there is a clear reason to do so I may upgrade or downgrade certain individuals in the group)
Peer evaluations	10% (individual score)
Final Test	20% (individual score)

COURSE METHODS

Regular sessions will have lectures complemented with additional external input. These will be in the form of case and textbook readings and in-class discussions. Each topic of the subject will be discussed using a combination of models, exercises, case discussions, and readings.

Team assignments and one team project are also required. 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 the team project in which actual results can be expected. Teams will consist of mean 6 students.

MAIN TEXTBOOK and CASES:

- Operations Strategy, Principles and Practice, by Jan A. Van Mieghem. Publisher *Dynamic Ideas*.

Schedule and Outline

Week	Session (lesson topics, outline, readings & cases)
1	<p><u>Introduction of Operations Strategy Framework</u></p> <p>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 discuss the goal of operations strategy and a framework to think about operations strategy. We will use the Swiss Watch Industry mini case as the main driving vehicle to introduce the framework</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Chapter 1: "Operations Strategy: Concept and Framework" • Swiss Watch Industry, mini-case 1 in Chapter 1.
2	<p><u>Competencies, capabilities and Operations</u></p> <p>We will discuss the goals of operations strategy, i.e., value maximization and alignment, and introduce tools to calculate NPV and tailor operations strategy.</p> <p>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 to evaluate a firm's operations strategy in a competitive setting.</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Chapter 2: "Competition, Competencies and Operations" • FedEx vs UPS, mini-case 2 in Chapter 2
3	<p><u>Capacity size and investment</u></p>

	<p>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 both qualitatively and quantitatively.</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Chapter 3: “Capacity Sizing and Investment”
4	<p><u>Capacity timing and expansion</u></p> <p>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. Timing means timing of capacity adjustment. The key trade-off is capacity adjustment costs and continuing costs of capacity excess or shortage. Two capacity timing tools will be introduced.</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Chapter 4: “Capacity Timing and Expansion”
5	<p><u>Capacity types: flexibility and consolidation</u></p> <p>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, or processing.</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Chapter 5: “Capacity Types, Flexibility and Consolidation”
6	<p><u>Capacity location</u></p> <p>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 methods, and discuss several network choices faced by organizations.</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Chapter 6: “Capacity Location, Global Networks and Offshoring
7	<p><u>Technology and innovation management</u></p> <p>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 an operation, 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.</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Chapter 10: “Improvement and Innovation”
8	<p><u>Matching supply with Demand</u></p> <p>In this class we will discuss how to match supply with demand strategically. Topics include strategic sourcing and demand management.</p> <p><u>Readings:</u></p> <ul style="list-style-type: none"> • Chapter 7: Strategic Sourcing, Supply Management and Outsourcing • Chapter 8: Demand and revenue management
9	<p>Final Test</p> <ul style="list-style-type: none"> • The final test will be administered during our regular class time in our classroom this week • The final test is to be done individually.

	<ul style="list-style-type: none"> • The questions will relate to the class readings and the materials presented by the instructor in the class sessions. • The primary objective of the test is that you will review and synthesize the content of the course.
10	No class due to NUS wellbeing day
11	<ul style="list-style-type: none"> • Students' project presentations • All teams are required to submit their Project Presentation Slides before class time today!
12	<ul style="list-style-type: none"> • Students' project presentations • Group project summary report and Peer evaluation are due end of today at 23:59!
13	No class due to PH (Good Friday)

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>