

Competing Through Operations (4 ECTS)

Introduction

The global business environment is undergoing the process of digitalization. But this is only the beginning: global value chains will soon benefit from Industry 4.0 which will accelerate processes, increase agility while liberating liquidity and redistributing parts of global manufacturing.

For companies to benefit from these opportunities (and overcome the connected challenges), they must have a good understanding of their Operations Strategy: which type of assets are best suited - and how to best use them to achieve the goals set forth by their business strategy. Their Operations Strategy will be driven by the ability to nimbly identify market opportunities and subsequently seize these opportunities by being flexible in terms of time (responding to demand swings and/or disruptions), scope (need for flexible production facilities in terms of product type) and scale (need for responsive ramp-up or ramp-down of capacity).

The main goal of this course will thus be to learn how to align adequately the operations of our companies to serve and enrich their business strategy. This will require developing a deep understanding of the operational implications of our strategic choices, to anticipate their impact both in terms of efficiency (e.g., cost, productivity, quality) and effectiveness (e.g., agility, customization, flexibility).

Objectives

This course will build on and complement the concepts and methodologies covered in the Operations Management course – i.e., process analysis, input-output, queuing, and inventory management- to discuss how operations can contribute to deliver the goals of the business strategy. This course aims to develop an understanding of how to use a company's resources (both fixed assets, competencies, and management thereof) in the most efficient way to achieve the goals defined by its business strategy, (i.e., achieve strategic coherence) and to use the operations capabilities to allow the company to achieve stronger strategic competitiveness.

Content

To achieve strategic coherence (i.e., alignment between functional areas and the objectives of a company's strategy), one must start with clear understanding of how a firm chooses to differentiate its

products and services from those of its major competitors. From an operations perspective, the relevant product/service attributes are cost, quality, availability, innovation, and environmental performance. Companies within a given sector usually choose one or two of these attributes to focus on. Once a company has gone from defining its competitive strategy (i.e., how to differentiate its products and services from its competitors) to identifying key product or service attributes (i.e., cost, availability, etc.), it must develop an operations strategy to achieve these goals.

The main topics covered by this course include:

- Operations management and Operations Strategy
- Strategic capacity management
- Manufacturing footprint decisions
- Outsourcing and contract manufacturing
- Supply chain management design and coordination
- Retail operations
- Innovation in operations: process technology and business model
- Supply chain social and environmental sustainability
- Service operations management
- Digital supply chains
- Industry 4.0
- Digital platform operations

Evaluation

Students will be evaluated along the following dimensions:

- Class participation (30%).

You are expected to be an active member of the class and contribute to the quality of the discussion. I will evaluate class participation using the following criteria: (i) relevance of the points made, (ii) understanding and analysis of the case, (iii) coherence—and absence of overlap—with other comments already made in class, and (iv) willingness to contribute. To assist you with case preparations, I provide in this document some preparation guidelines for each session.

- Assignments and project research (30%).
- Final exam (40%)

Competences

Basic

CB6. Possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context.

CB7. The students know how to apply the knowledge acquired and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their area of study.

CB8. The students can integrate knowledge and face the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on social and ethical responsibilities linked to the application of their knowledge and judgments.

CB9. Students know how to communicate their conclusions and the knowledge and ultimate reasons that support them to specialized and non-specialized audiences in a clear and unambiguous way.

CB10. Students possess the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.

General

CG1. Expose and discuss business situations rigorously and effectively, using both formal and informal procedures, and providing relevant data to support their observations and conclusions.

CG4. Understand and apply the mechanisms that generate an environment of collaboration, communication, and trust between the members of a team or organization.

CG6. Prioritize the objectives, program the activities in an appropriate way and execute them in the foreseen term.

Specific

CE14. Analyze and design optimized operations and logistics systems with attention to processes, queues, and inventory management.

CE15. Learn to evaluate, select, and develop operational projects in emerging countries with poor market institutions and infrastructures.

CE16. Implement product and service delivery strategies that integrate all the actors in the production chain: suppliers, manufacturers, distributors, and customers.