

DOS4712 COORDINATION AND FLEXIBILITY IN SCM

AY2021/2022 Semester 1

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COURSE DESCRIPTION

Supply chains have become far-flung and global as companies expand their operations to new markets and new supply sources. Concurrently, a number of macro-trends are emerging and evolving which cause changes to traditional supply chains structures and assumptions. These include: rising costs in the usual outsourcing manufacturing sites, entering into emerging markets, changing country regulations and regional trade agreements, impact of technologies on new business models and process changes, cross-border M&A, and emerging marketing companies expanding regionally, etc.

Companies will have to continuously evaluate their strategies and adapt their supply chains to deal with these changes. They will need to improve their flexibility, coordination, and responsiveness to deal with the risks and opportunities.

LEARNING OUTCOMES

The course will cover functional areas of the supply chain and integration of these concepts into a holistic framework. It will examine how global supply chain configurations are changing and adapting, and how companies should prepare for the impact of macroeconomic trends and new technologies to their business models, distribution, and supply chains. Through case studies, simulation game, and project work, students will gain a better understanding of corporate strategies, and how to align their supply chains and manage risks.

TOPICS

- 1) Key supply chain concepts and strategies
- 2) Global supply chain configuration and re-alignment
- 3) Planning for supply chain risk and disruption
- 4) Simulation game
- 5) Impact of technology innovations and new business models
- 6) Group project

READINGS

Textbook: Supply Chain Management: A Concise Guide, 2nd Edition, by Puay-Guan Goh, Pearson 2015

Article readings: Refer to Course Schedule

PREREQUISITE

- (1) DSC2006 Operations Management or DAO2703 Operations and Technology Management
- (2) DSC3201/DOS3701 Supply Chain Management
- (3) DAO1704/DAO1704X Decision Analytics using Spreadsheets (or has knowledge of calculus and probability)

PRECLUSION

BMS5202: Global Supply Chain Management

ASSESSMENTS

| Components | Weight |
|------------------------|-------------|
| Individual Assignments | 15% |
| Midterm Test | 25% |
| Class Participation | 15% |
| Group Simulation Game | 20% |
| Group Project | 25% |
| Total | 100% |

COURSE SCHEDULE

| Instructional Week | Content | Cases / Examples | Reading (s) | Deadlines |
|---------------------------|--|------------------|--|-----------|
| 1 10 th Aug | <p>Course Introduction: structure and expectations</p> <p>Challenges and risks of a global supply chain, in an era of globalization, macroeconomic changes, emerging markets, and disruptive technologies</p> | | <p>Textbook Chapter 1</p> <p>“Guest Outlook From Singapore: 2020 Outlook for Global Supply Chains”</p> <p>“The high price of breaking up global supply chains”</p> <p>“The pandemic helped topple two retailers. So did private equity.”</p> <p>“Warehousing sector well-positioned to weather</p> | |

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| | | | <p>coronavirus disruption, report finds”</p> <p>“Starbucks’ Howard Schultz: Finally, A CEO Who Gets the Importance of the Supply Chain”</p> | |
| <p>2 17th Aug</p> | <p>Managing sourcing and procurement</p> <p>Sourcing segmentation</p> <p>Risk sharing contracts</p> | <p>Case: Walmart – procurement for competitive advantage</p> <p>Case: HP – segmenting demand using portfolio contracts</p> <p>Case: Risk sharing with distributors at Stainless Structural</p> | <p>Textbook Chapter 2</p> <p>“UK Factories stockpile goods at fastest pace in 27 years”</p> <p>“Pigment shortage hits auto makers”</p> <p>“Now Showing at Blockbuster: How Revenue-sharing Contracts Improve Supply Chain Performance”</p> | |
| <p>3 24th Aug</p> | <p>Manufacturing strategies and product design</p> <p>Push versus pull concepts</p> <p>Digitalization of products</p> <p>Changing product design paradigms</p> <p>Explanation of simulation game</p> | <p>Case: Assa Abloy -- - creating digital products</p> <p>Case: Haier – targeting new market segments</p> | <p>Textbook Chapter 3</p> <p>“Yale door locks' parent company to acquire August Home”</p> <p>“Louis Vuitton Goes Upmarket in Smartwatch Fight With Apple”</p> | <p>Submission of teams for projects and simulation game</p> <p>Class voting on simulation game scenario</p> |
| <p>4 31st Aug</p> | <p>Integrated supply chains</p> <p>Inventory risk management</p> <p>Is inventory always bad?</p> | <p>Case: Zara’s fast fashion</p> <p>Case: HP – optimizing the global supply chain</p> | <p>Textbook Chapter 4 and Chapter 5</p> <p>“The Downside of Just-in-Time Inventory”</p> | <p>Simulation game round 1 and 2</p> |

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| | | | “Tariffs will cost Harley more than \$40 million in 2018” | |
| 5 7 th Sep | <p>Planning for supply chain risk and disruption</p> <p>Risk Management framework</p> <p>Strategic and operational contingency planning</p> | Case: Nokia and Ericsson in 2000 | <p>Textbook Chapter 7</p> <p>“The business must go on: get contingency planning right”</p> <p>“Why Nissan’s Disaster Recovery Bested Rivals”</p> | Simulation Game Round 3 and 4 |
| 6 14 th Sep | <p>Supply Chain as competitive strategy</p> <p>Supply chain impact on P&L</p> <p>Global supply chain re-alignment</p> <p>The new manufacturing hubs</p> <p>New distribution networks</p> | <p>Case: Foxconn and its manufacturing decisions</p> <p>Case: The new China-Europe distribution network</p> | <p>Textbook chapter 6 and 11</p> <p>“Huawei Begins Making Phones in India to Tap Local Market Boom”</p> <p>“China and Europe: Reconnecting Across a New Silk Road”</p> | Simulation game Round 5 and 6 |
| Recess week | No class (note this week may be used as make-up week) | | | |
| 7 28 th Sep | <p>Simulation game debrief</p> <p>Prize giving</p> <p>Supply chains post-Covid-19</p> | | <p>“Why the coronavirus crisis won’t weaken China’s position in the global supply chain”</p> <p>“Coronavirus: China faces fight to hang onto foreign manufacturers as US, Japan, EU make Covid-19 exit plans”</p> | Submission of simulation game report before class |

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| | | | “How COVID-19 Is Transforming E-Commerce” | |
| 8 5 th Oct | Managing the global value chain Entering New Markets Outsourcing vs inhouse decisions Industry Guest Speaker | Case: Lego’s outsourcing experience -- “We are more special than we expected” Case: Esco Group – how a SME went global | Textbook Chapter 8 and 12 “Why Amazon Can’t Make A Kindle In the USA” | |
| 9 12 th Oct | Future-scaping supply chains: Technology Innovation and Enabling Technologies | Case: Netflix – disrupting the video rental industry twice Case: Bossard – VMI using Smart Bin | Textbook Chapter 9 “3D Printing And The New Economics Of Manufacturing” “Commentary: Lessons from the fall of once-mighty bike-sharing giants” “Wal-Mart Tackles Food Safety With Trial of Blockchain” “Robot revolution helps Adidas bring shoemaking back to Germany” | Project outline submission |
| 10 19 th Oct | Midterm | | | |
| 11 26 th Oct | Future-scaping supply chains: New distribution channels and new distribution models The blurring of lines between retail, logistics, e-commerce | Case: Amazon and its transformation from pure e-commerce | Textbook Chapter 10 “Coronavirus Spurs Retail Re-Engineering, Store Property Changes” “The Infinite Shelf: How E-Commerce is | |

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| | <p>New distribution capabilities and innovations emerge</p> <p>Industry Guest Speaker</p> | | <p>Shaking Up Consumer Staples”</p> <p>“Chinese Startup Aims to Overtake Starbucks”</p> <p>FedEx Bets on Automation as It Prepares to Fend Off Uber and Amazon”</p> | |
| 12 2 nd Nov | <p>Group Project Presentations</p> | | | <p>Project to be submitted via pre-recorded video</p> <p>Class voting for best projects</p> |
| 13 9 th Nov | <p>Group Project debrief</p> <p>Prize presentation for winning teams</p> <p>Course wrapup: Supply chains of the future</p> | | | <p>Submission of project report (PPT format)</p> |

Article Readings:

“The high price of breaking up global supply chains”, Shih, Willy, Nikkei Asian Review, July 2, 2019, accessed at <https://asia.nikkei.com/Opinion/The-high-price-of-breaking-up-global-supply-chains>

“Guest Outlook From Singapore: 2020 Outlook for Global Supply Chains”, Goh, Puay Guan, Supply Chain Management Review, January 30, 2020, accessed at https://www.scmr.com/article/guest_outlook_from_singapore_2020_outlook_for_global_supply_chains

“The pandemic helped topple two retailers. So did private equity.”, Maheshwari, Sapna and Vanessa Friedman, Boston.com. accessed at <https://www.boston.com/news/business/2020/05/15/i-crew-neiman-marcus-bankruptcy>

“Warehousing sector well-positioned to weather coronavirus disruption, report finds”, Forde, Morgan, SupplyChain Dive, March 17, 2020, accessed at <https://www.supplychaindive.com/news/warehousing-sector-well-positioned-to-weather-coronavirus-disruption-repor/574285/>

“Starbucks’ Howard Schultz: Finally, A CEO Who Gets the Importance of the Supply Chain”, Berman, Jeff, SupplyChain 247, Oct 03, 2015, accessed at http://www.supplychain247.com/article/starbucks_howard_schultz_a_ceo_who_gets_supply_chain/news

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“Boeing, Airbus Look to Land Profits by Making Their Own Aircraft Part”, Wall, Robert, and Doug Cameron, The Wall Street Journal, Sept 8, 2017, accessed at <https://www.wsj.com/articles/boeing-airbus-look-to-land-profits-by-making-their-own-aircraft-parts-1504782001>

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“Yale door locks' parent company to acquire August Home”, Price, Molly, Cnet. December 5, 2017, accessed at <https://www.cnet.com/news/yale-parent-company-assa-abloy-to-acquire-august-home/>

“Louis Vuitton Goes Upmarket in Smartwatch Fight With Apple”, Greter, Corrine, and Robert Williams, Reuters, July 11, 2017, accessed at <http://www.bloomberg.com/news/articles/2017-07-11/lvmh-enlists-louis-vuitton-in-smartwatch-fight-against-apple>

“The Downside of Just-in-Time Inventory”, Ray, Susanna, and Thomas Black, Business Week, Mar 24, 2011, accessed on http://www.businessweek.com/magazine/content/11_14/b4222017701856.htm

“Tariffs will cost Harley more than \$40 million in 2018” Robert Ferris, CNBC Network, 23rd Oct 2018, assessed at: <https://www.cnbc.com/2018/10/23/tariffs-will-cost-harley-davidson-more-than-40-million-in-2018.html>

“The business must go on: get contingency planning right”, Goh, Puay Guan, Yahoo, 14 February 2020, accessed at <https://sg.news.yahoo.com/the-business-must-go-on-get-contingency-planning-right-093051152.html>

“Why Nissan’s Disaster Recovery Bested Rivals”, Nunn, Peter, Edmunds Auto Observer, December 5, 2011, accessed at <http://www.edmunds.com/autoobserver-archive/2011/12/why-nissans-disaster-recovery-bested-rivals.html>

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“Why the coronavirus crisis won’t weaken China’s position in the global supply chain”, Zhang, Jun, South China Morning Post, 9th Apr 2020, accessed at <https://www.scmp.com/comment/opinion/article/3078940/why-coronavirus-crisis-wont-weaken-chinas-position-global-supply>

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“How COVID-19 Is Transforming E-Commerce”, Columbus, Louis, Forbes, Apr 28, 2020, accessed at <https://www.forbes.com/sites/louiscolombus/2020/04/28/how-covid-19-is-transforming-e-commerce/#e7811893544f>

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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:

<http://www.nus.edu.sg/registrar/adminpolicy/acceptance.html#NUSCodeofStudentConduct>

Online Module on Plagiarism:

<http://emodule.nus.edu.sg/ac/>