

MSc Seminar on Operations Management: Behavioural Operations and System Dynamics

Summer term 2026, version: 23 March 2026

Please note: This document reflects our planning before the term started; it will **not** be updated regularly. For short-term changes regarding rooms or times, see Campus. Changes regarding the content will be discussed in class and, if appropriate, communicated via Ilias.

Learning objectives

After successfully finishing the course, students can:

- independently understand, summarize, and criticize a scientific paper;
- link insights of a scientific paper to current streams of research and broader discussions in the field of operations and supply chain management;
- moderately extend the paper's study (e.g., expand the model, formulate additional hypotheses, run more statistical analyses, discuss the insights with practitioners);
- constructively integrate feedback from peers or supervisors into their work;
- write a scientific report;
- give an academic presentation.

Content

The seminar asks students to independently acquire knowledge from a scientific paper. This paper has to be understood, summarized, criticized, extended, and put into context. Students write a report and hold a presentation about their understanding and findings.

Requirements

Course "Supply Chain Dynamics" or "Behavioural Operations Management" successfully passed.

Literature

Students are requested to choose one scientific article from the following list, on which their seminar paper and presentation will be based; additional topics can be provided if more students want to attend the course (nos. 1-10 rather link to "Supply Chain Dynamics"; nos. 11-20 instead link to "Behavioural Operations Management"):

1. Sun, Qi, Shao, Hui, Xu, Zeping, Lu, Qihui, and Ma, Junyong. "The influence of government regulations on online public opinion and retail channel strategies" *Journal of the Operational Research Society* (2025): 1-20.
2. Coyle, R. G., and Paul A. Gardiner. "A system dynamics model of submarine operations and maintenance schedules." *Journal of the Operational Research Society* 42, no. 6 (1991): 453-462.

3. Naugle, Asmeret, Manickam, Indu, Steinmetz, Scott, Schute, Paul, Sweitzer, Matt, Washburne, Alex. "Trusted Simulation: Considering model quality in the context of user trust" *System Dynamics Review* 4, no. 41 (2025).
4. Mehrjoo, Marzieh, and Pasek, Zbigniew J. "Risk assessment for the supply chain of fast fashion apparel Industry: A system dynamics framework" *International Journal of Production Research* 54, (2016): 28-48.
5. Li, Dengyuhui, Jiao, Jianbin, Wang, Shouyang, Zhou, Guanghui, and Liu, Dongning. "System dynamics simulation for supply chain performance under maritime transport disruptions: a case study of Suez Canal blockage" *International Transactions in Operational Research* 0, (2025): 1-29.
6. Jalali, Mohammad S., and Elizabeth Beaulieu. "Strengthening a weak link: transparency of causal loop diagrams—current state and recommendations." *System Dynamics Review* (2023).
7. Akhavan, Ali, and Mohammad S. Jalali. "Generative AI and simulation modeling: how should you (not) use large language models like ChatGPT." *System Dynamics Review* (2023).
8. Jalali, Mohammad S., and Ali Akhavan. "Integrating AI language models in qualitative research: Replicating interview data analysis with ChatGPT." *System Dynamics Review* (2024).
9. Kunc, Martin, Federico Barnabè, and Maria Cleofe Giorgino. "Uncovering dynamic complexity in annual reports: a methodological approach using resource mapping." *System Dynamics Review* 39, no. 4 (2023): 299-335.
10. Rohilla, Ankit, Kundu, Tanmoy, Kapoor, Rohit, and Sheu, Jiuh-Biing. "Enhancing retail inventory replenishment amid product life cycle shifts: A system dynamics approach" *IEE Transactions on Engineering Management* 72, (2025).
11. Khan, Mohd Mujahid and B. Vipin. "Abundance Versus Scarcity: An Experimental Study of Financially Constrained Newsvendors." *Journal of Operations Management* 71, no. 5 (2025): 630-650.
12. Mosner, Felix L., Fabian J. Sting, and Aravind Chandrasekaran. "How Middle Managers Affect Frontline Idea Generation: Evidence From Healthcare Operations." *Journal of Operations Management* 72, no. 1 (2025): 21-41.
13. Cash, Philip, Melanie E. Kreye, and Tyson R. Browning. "One Step Forward, Two Steps Back: Managing Uncertainties in Outcomes, Deliverables, and Means in Behavioral Intervention Development Projects." *Journal of Operations Management* 72, no. 1 (2025): 81-107.
14. Stouten, Hendrik, and Andreas Größler. "Task Complexity in Individual Stock Control Tasks for Laboratory Experiments on Human Understanding of Dynamic Systems." *Systems Research and Behavioral Science* 34 (2017): 62-77.
15. Vazquez Melendez, Elena Isabel, Paul Bergey, and Brett Smith. "Blockchain technology for supply chain provenance: increasing supply chain efficiency and consumer trust." *Supply Chain Management* 29, no. 4 (2024): 706-730.
16. Chen, Yang, Samuel N. Kirshner, Anton Ovchinnikov, Meena Andiappan, and Tracy Jenkin. "A Manager and an AI Walk into a Bar: Does ChatGPT Make Biased Decisions Like We Do?" *Manufacturing & Service Operations Management* 27, no. 2 (2015): 354-368.
17. Li, Meng. "Newsvendors with Customer Referrals." *Production and Operations Management* 35, no. 1 (2025): 122-128.
18. Chaturvedi, Aadhaar. "Information Sharing and Contracting Between Competing Manufacturers and Common Retailer." *Production and Operations Management* 35, no. 2 (2025): 532-545.

19. Son, Byung-Gak, Lilian M. De Menezes, Seongtae Kim, Adriana Leiras, and Salomé Ruel. "On sustainable operations and supply chain management: has the debate on diversity, equity and inclusion been settled." *International Journal of Operations & Production Management* 46, no. 3 (2026): 341-366.
20. Nakamura, Azusa, Antony Paulraj, Aneesh Datar, and Paolo Barbieri. "The intriguing effect of women board representation and women power on global supply base risk" *International Journal of Operations & Production Management* 46, no. 3 (2026): 425-451.

Timetable

Date, time	Topic	Where?	Who?
13/04/2026, 14:00–15:30	Kick-off: explanation of procedures and topics*	M17.72	Größler
20/04/2026, 14:00–15:30	How to summarize and criticize a scientific paper?*	M17.72	Viganò; Wiesner
27/04/2026, 14:00–15:30	How to link insights of a scientific paper to current streams of research?*	M17.72	Viganò; Wiesner
04/05/2026, 14:00–15:30	How to extend a scientific paper?*	M17.72	Viganò; Wiesner
11/05/2026, 14:00–15:30	Introduction to scientific writing*	M17.72	Viganò; Wiesner
12/05/2026– 02/06/2026	Please register on C@mpus for the examination	C@mpus-System	
18/05/2026, 14:00–15:30	Organized peer-review of the table of contents	M17.72	Viganò; Wiesner
01/06/2026, 14:00–15:30	Current methodological debates in system dynamics and experimental research	M17.72	Größler
08/06/2026	How to write a seminar paper? How to give a seminar presentation?	Video lectures (see Ilias)	Größler
15/06/2026, 14:00–15:30	Intermediate oral presentation & discussion: outline, progress, questions*	M17.72	Viganò; Wiesner
29/06/2026, 14:00–15:30	Organized peer-reviews of papers	M17.72	Viganò; Wiesner
06/07/2026, 14:00–15:30	Organized peer-review of presentations	M17.72	Viganò; Wiesner
12/07/2026, 12:00	Deadline for submitting papers and presentation material on ILIAS	Ilias	
13/07/2026, 11:30–17:15	Presentation of seminar papers*	Tba	all

* Attendance is compulsory for passing the course

Intermediate supervision

During the period of writing the seminar paper and preparing the presentation, advice can be sought from the department's research associates after making an appointment. **In general, questions should be asked during intermediate classes (see timetable).**

Examination

Student assessment is based on a written and an oral examination: seminar paper and seminar presentation—weight: seminar paper 60%, seminar presentation 40%.

The seminar paper should not be longer than 12 pages (or 15 pages including cover sheet, table of contents, and literature list), font size 12 points, font type Times New Roman, line spacing 1.5, margins 2.5 cm (top and bottom) and 2 cm (left and right). Please provide page numbers. The cover page should include the title of the paper, the student's name, and the matriculation number. Please upload an electronic version on Ilias before the presentations (**i.e., deadline: 12 July 2026, 12:00 noon**). About the criteria for a good paper, please check the learning objectives and watch the video lecture "How to write a seminar paper". More information on formal requirements can also be found at <https://www.bwi.uni-stuttgart.de/studium/pdfs/Zitierrichtlinien.pdf>.

The seminar presentation should not exceed 45 minutes, including discussion time (the duration may be adjusted if there are many participants). Thus, it must focus on the importance and relevance of the topic being discussed, the simulation model employed, the most important findings within the paper, and a criticism and extension of these findings. PowerPoint slides are a possible way to support the talk, but other formats are also encouraged, which must be organized by the presenters. Presentation materials must be made available to the teachers for assessment. Students must be prepared to answer questions about their presentation and paper. Additionally, they should be able to ask questions about their fellow students' presentations. For more information, also watch the video lecture "How to give a seminar presentation".