MSc Seminar on Operations Management

Winter term 2024/2025, version: 1 October 2024

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., extend 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 based on 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 rather link to "Behavioural Operations Management"):

1. Simonovic, Slobodan P., and Sajjad Ahmad. "Computer-based model for flood evacuation emergency planning." *Natural Hazards* 34 (2005): 25-51.
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. Litwin, Paweł, and Anna Szymusik. "System Dynamics in Manufacturing Processes Modelling and Analysis." In *International Conference Innovation in Engineering*, pp. 14-26. Cham: Springer Nature Switzerland, 2024.
4. Capelo, Carlos, Renato Pereira, and João Ferreira Dias. "Expanding model transparency and learning potential through structural and behavioural debriefings." *Systems Research and Behavioral Science* (2024).
5. Langley, Paul A. "Beyond just talking strategy: using gaming simulations to catalyze airline managers' buy-in to novel strategies that can shape or adapt to profit cyclicality." *Systemic Practice and Action Research* 37, no. 2 (2024): 187-205.
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. Paine, James. "Dynamic supply chains with endogenous dispositions." *System Dynamics Review* 39, no. 1 (2023): 32-63.

11. Aşık, Gürsu, and Doğança Küçük, Zerrin. "Metacognition in action as a possible explanation for stock-flow failure." *System Dynamics Review* 37, no. 4 (2021): 253-282.
12. Oh, Han K., Abdulla, Huseyn, and Oliva, Rogelio. "Behavioral multi-lever decision-making: A study of consumer return policy, price, and inventory decisions." *Journal of Operations Management* 70, no. 1 (2023): 137-156.
13. Ding, Haoyuan, Hu, Yichuan, Jiang, Han, Wu, Jing, and Zhang, Yu. "Social embeddedness and supply chains: Doing business with friends versus making friends in business." *Production and Operations Management* 32, no. 7 (2023): 2154–2172.
14. Bolton, Gary E., Bonzelet, Sabrina, Stangl, Tobias, and Thonemann, Ulrich W. "Decision making under service-level contracts: The role of cost saliency." *Production and Operations Management* 32, no. 4 (2023): 1243-1261.
15. Cleophas, Catherine, and Schüetze, Claudia. "Decision biases in revenue management revisited: Dynamic decision-making under stationary and nonstationary demand." *Decision Science* 55, no. 2 (2022): 159-175.
16. Carter, Craig R., Rockwood, Renae F., Patel, Pankaj C., Bachrach, Daniel, Bendoly, Elliot, DuHadway, Scott, and Kaufmann, Lutz. "Experiments in supply chain management research: A systematic review and future directions." *Journal of Business Logistics* 45, no. 3 (2024): e12382.
17. Davis, Andrew M., Gaur, Vishal, and Kim, Dayoung. "Consumer Learning from Own Experience and Social Information: An Experimental Study." *Management Science* 67, no. 5 (2020): 2924-2943.
18. Daniels, Kaitlin M., and Valdés, León. "Trying and Failing: Biases in Donor Aversion to Rejection." *Production and Operations Management* 30, no. 12 (2021): 4356-4373.

19. Burkhardt, Maximilian, Nitsch, Felix J., Spinler, Stefan, & vanWassenhove, Luk. "The effect of acute stress on humanitarian supplies management." *Production and Operations Management* 32, no. 8 (2023): 2546-2559.
20. Januszek, Sven, Netland, Torbjørn H., and Furlan, Andrea. "The role of managerial perceptions and behaviors across hierarchical levels during lean implementation." *International Journal of Operations & Production Management* 44, no. 1 (2024): 54-74.

Timetable

Date, time	Topic	Where?	Who?
24/10/2024, 09:45–11:15	Kick-off: explanation of procedures and topics	M11.11	Größler
31/10/2024, 11:30–13:00	Organized peer-review of table of contents	M11.11	Wiesner
14/11/2024, 11:30–13:00	**Introduction to scientific writing (1/2)***	**M11.11**	**Wiesner**
13/11/2024–04/12/2024	Please register on C@mpus for examination	C@mpus-System	
21/11/2024, 11:30–13:00	**Introduction to scientific writing (2/2)***	**M11.11**	**Wiesner**
28/11/2024, 11:30–13:00	Current methodological debates in system dynamics and experimental research	M11.11	Größler
12/12/2024, 11:30–14:00	How to write a seminar paper	Video lecture (see Ilias)	Größler
	Intermediate oral presentation & discussion: outline, progress, questions	M11.11	Wiesner
09/01/2025, 11:30–13:00	How to give a seminar presentation	Video lecture (see Ilias)	Größler
	Organized peer-reviews of papers	M11.11	Wiesner
23/01/2025, 11:30–13:00	Organized peer-review of presentations	M11.11	Wiesner
05/02/2025, 12:00	Deadline for submitting papers and presentation material on ILIAS	Ilias	
06/02/2025, 11:30–17:15	**Presentation of seminar papers***	**Tba**	**all**

*** Attendance compulsory for passing the course**

Intermediate supervision

During the period of writing the seminar paper and preparing the presentation, advice can be sought with the research associates of the department after making an appointment. **It is highly recommended that students use this opportunity at least once**.

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: 05 February 2025, 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 be longer than 45 minutes, including time for discussion (duration might be adjusted in case of 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 regarding their presentation and paper; relatedly, students should be able to ask questions regarding the presentations of their fellow students. For more information, also watch the video lecture "How to give a seminar presentation".