

Hand-out MSc Seminar on Operations Management

Winter term 2022/2023, version: 21 September 2022

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 ([https://ilias3.uni-stuttgart.de/goto/Uni Stuttgart crs 2828232.html](https://ilias3.uni-stuttgart.de/goto/Uni%20Stuttgart%20crs%202828232.html)).

Learning objectives

After successfully finishing the course, students can:

- independently understand a scientific paper;
- 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) management;
- moderately extend the study (e.g., extend the model, formulate additional hypotheses, run more statistical analyses, discuss the insights with practitioners);
- 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 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 (nos. 1-10 rather link to “Supply Chain Dynamics”; nos. 11-20 rather link to “Behavioural Operations Management”):

1. Ahmad, S., & Simonovic, S. P. (2000). System dynamics modeling of reservoir operations for flood management. *Journal of computing in civil engineering*, 14(3), 190-198.
2. Đula, I., & Größler, A. (2021). Inequity aversion in dynamically complex supply chains. *European Journal of Operational Research*, 291(1), 309-322.
3. Thompson, B. P., & Bank, L. C. (2010). Use of system dynamics as a decision-making tool in building design and operation. *Building and Environment*, 45(4), 1006-1015.

4. Coyle, R. G., & Gardiner, P. A. (1991). A system dynamics model of submarine operations and maintenance schedules. *Journal of the Operational Research Society*, 42(6), 453-462.
5. Aşık, G., & Doğança Küçük, Z. (2021). Metacognition in action as a possible explanation for stock-flow failure. *System Dynamics Review*, 37(4), 253-282.
6. Wolstenholme, E. F. (1988). Defence operational analysis using system dynamics. *European journal of operational research*, 34(1), 10-18.
7. Rahmandad, H., Lim, T.Y., & Sterman, J. (2021). Behavioral dynamics of COVID-19: estimating underreporting, multiple waves, and adherence fatigue across 92 nations. *System Dynamics Review*, 37(1), 5-31.
8. Aschauer, G., Gronalt, M., & Mandl, C. (2015). Modelling interrelationships between logistics and transportation operations—a system dynamics approach. *Management Research Review*.
9. Coyle, J. M., Exelby, D., & Holt, J. (1999). System dynamics in defence analysis: some case studies. *Journal of the Operational Research Society*, 50(4), 372-382.
10. Georgiadis, P., & Besiou, M. (2008). Sustainability in electrical and electronic equipment closed-loop supply chains: a system dynamics approach. *Journal of cleaner production*, 16(15), 1665-1678.
11. Buil-Fabregà, M., del Mar Alonso-Almeida, M., & Bagur-Femenías, L. (2017). Individual dynamic managerial capabilities: Influence over environmental and social commitment under a gender perspective, *Journal of Cleaner Production*, 151, 371-379.
12. AlKhars, M., Evangelopoulos, N., Pavur, R., & Kulkarni, S. (2019). Cognitive biases resulting from the representativeness heuristic in operations management: an experimental investigation. *Psychology research and behavior management*, 12, 263.
13. Moritz, B., Siemsen, E., & Kremer, M. (2014). Judgmental forecasting: Cognitive reflection and decision speed. *Production and Operations Management*, 23(7), 1146-1160.
14. Ovchinnikov, A., Moritz B.B., & Quiroga, B.F. (2015). Competing Against a Behavioral Newsvendor, *Production and Operations Management*, 24(11), 1783–1793.
15. Weinhardt, J. M., Hendijani, R., Harman, J. L., Steel, P., & Gonzalez, C. (2015). How analytic reasoning style and global thinking relate to understanding stocks and flows. *Journal of Operations Management*, 39-40, 23-30.
16. Ball, G. P., Shah, R., & Donohue, K. (2018). The decision to recall: A behavioral investigation in the medical device industry. *Journal of Operations Management*, 62, 1-15.
17. Ganuthula, V.R.G., & Dyaram, L. (2016). Rationality and the reflective mind: A case for typical performance measure of cognitive ability, *Learning and Individual Differences*, 49, 216-223.
18. Boffelli, A., Golini, R., Orzes, G., & Dotti, S. (2020). Open the box: A behavioural perspective on the reshoring decision-making and implementation process. *Journal of Purchasing and Supply Management*, 26(3), 100623.
19. Evans, J. H., Hannan, R. L., Krishnan, R., & Moser, D. V. (2001). Honesty in managerial reporting. *Accounting Review*, 76(4), 537-559.
20. Wu, X., & Niederhoff, J.A. (2014). Fairness in Selling to the Newsvendor. *Production and Operations Management*, 23(11), 2002-2022.

Timetable

| Date, time | Topic | Where? | Who? |
|----------------------------|---|---------------------------|----------------|
| 20/10/2022, 11:30–13:00 | Kick-off: explanation of procedures and topics | M11.91 | Größler |
| 17/11/2022 11:30–13:00 | Organized peer-review of table of contents | M11.91 | Horn & Wiesner |
| | Please register on C@mpus for examination | C@mpus-System | |
| 01/12/2022 11:30–13:00 | Current methodological debates in system dynamics and experimental research | M11.91 | Größler |
| 15/12/2022 11:30–14:00 | How to write a seminar paper | Video lecture (see Ilias) | Größler |
| | Intermediate oral presentation & discussion: outline, progress, questions | M11.91 | Horn & Wiesner |
| 12/01/2023, 11:30–13:00 | How to give a seminar presentation | Video lecture (see Ilias) | Größler |
| | Organized peer-reviews of papers | M11.91 | Horn & Wiesner |
| 26/01/2023 11:30–13:00 | Organized peer-review of presentations | M11.91 | Horn & Wiesner |
| 08/02/2023 12:00 | Deadline for submitting papers and presentation material on ILIAS | Ilias | |
| 09/02/2023 11:30–17:15 | Presentation of seminar papers | Tba | all |

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, Ms. Horn and Mr. Wiesner in KII, 07.005 after making an appointment. It is advised that students use this opportunity two or three times but not more than five times.

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 provide an electronic version (on Ilias) before the presentations (i.e., **deadline: 08 February 2023, 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 forms (e.g., speech with hand-outs, Prezis, posters, model walk-throughs) are also encouraged but must be organized by the students. Presentation material must be made available to the teachers for assessment. Students must be prepared to answer questions regarding their presentation and paper. For more information, also watch the video lecture “How to give a seminar presentation”.