**Hand-out Seminar MSc: Recent studies of system dynamics in (operations) management**

**Winter term 2019/20**, version: 30 September 2019

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 a scientific paper;
* summarize and criticize a scientific paper;
* put a scientific paper into context with regard to broader discussions in the field of (operations) management;
* rebuild and moderately extend the simulation model in the paper;
* 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” 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:

1. Rammelt, C.F. (2019). The dynamics of financial instability: simplifying Keen’s Goodwin-Minsky model, *System Dynamics Review* **35**(2), 140–159.
2. Cavana, R.Y. et al. (2019). A “Power and Influence” political archetype: the dynamics of public support, *System Dynamics Review* **35**(1), 70–103.
3. Anderson, E.G., K. Lewis, G.T. Ozer (2018). Combining stock-and-flow, agent-based, and social network methods to model team performance, *System Dynamics Review* **34**(4), 527–574.
4. Gonçalves, P. (2018). From boom to bust: an operational perspective of demand bubbles, *System Dynamics Review* **34**(3), 389–425.
5. Woodruff, S., T.K. BenDor, A.L. Strong (2018). Fighting the inevitable: infrastructure investment and coastal community adaptation to sea level rise, *System Dynamics Review* **34**(1-2), 48–77.
6. Kapmeier, F., P. Gonçalves (2018). Wasted paradise? Policies for small island states to manage tourism-driven growth while controlling waste generation: the case of the Maldives, *System Dynamics Review* **34**(1-2), 172–221.
7. Hayward, J., P.A. Roach (2017). Newton’s laws as an interpretative framework in system dynamics, *System Dynamics Review* **33**(3-4), 183–218.
8. Ghaffarzadegan, N. et al. (2017). Dell’s SupportAssist customer adoption model: enhancing the next generation of data-intensive support services, *System Dynamics Review* **33**(3-4), 219–253.
9. Keith, D.R., J.D. Sterman, J. Struben (2017). Supply constraints and waitlists in new product diffusion, *System Dynamics Review* **33**(3-4), 254–279.
10. Paul, S., J. Venkateswaran (2017). Impact of drug supply chain on the dynamics of infectious diseases, *System Dynamics Review* **33**(3-4), 280–310.
11. Ansah, J.P. et al. (2017). Projecting the number of elderly with cognitive impairment in China using a multi-state dynamic population model, *System Dynamics Review* **33**(2), 89–111.
12. P.J. Gambardella, D.E. Polk, D.W. Lounsbury, R.L. Levine (2017). A co-flow structure for goal-directed internal change, *System Dynamics Review* **33**(1), 3–33.
13. Lamberson, P.J. (2016). Winner-take-all or long tail? A behavioral model of markets with increasing returns, *System Dynamics Review* **32**(3-4), 233–260.
14. Glöser-Chahoud, S., J. Hartwig, I.D. Wheat, M. Faulstich (2016). The cobweb theorem and delays adjusting supply in metals’ markets, *System Dynamics Review* **32**(3-4), 279–308.
15. Moxnes, E., P.I. Davidsen (2016). Intuitive understanding of steady-state and transient behavior, *System Dynamics Review* **32**(2), 130–155.
16. Jalili, Y., D.N. Ford (2016). Quantifying the impacts of rework, schedule pressure, and ripple effect loops on project schedule performance, *System Dynamics Review* **32**(1), 82–96.

Timetable

|  |  |  |
| --- | --- | --- |
| **Date, time** | **Topic** | **Room** |
| 17/10/2019,11:30–13:00 | Kick-off: explanation of procedures and topics | M17.91 |
| 13/11/2019 – 05/12/2019 | Please register on C@mpus for examination |  |
| 14/11/2019,11:30–13:00 | Current methodological debates in system dynamics (lecture) | M17.91 |
| 28/11/2019,11:30–13:00 | How to write a seminar paper & peer-review of table of contents | M17.91 |
| 12/12/201909:45–13:00 | Intermediate oral presentation & discussion: outline, progress, questions (exact timetable will be provided but students are expected to attend all presentations) | M17.91 |
| 16/01/2020,11:30–13:00 | How to give a seminar presentation & peer-review of papers | M17.91 |
| 29/01/2020,12:00 | Deadline for submission of seminar paper and presentation (Ilias) |  |
| 30/01/2020 &31/01/2020,09:45–17:15 | Presentation of seminar papers (exact timetable will be provided but students are expected to attend all presentations) | tba |

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, Mr Brauch and Mr Đula in KII, 07.005, Tuesdays 10:00–12:00 or 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 matriculation number. Please provide an electronic (on Ilias) as well as a paper version before the presentations (i.e., deadline: 1 February 2019, 09:45). With regard to the criteria for a good paper, please check the learning objectives. A structure with more than five sections or more than two levels of sub-sections is not useful for a seminar paper. More information on formal requirements can be found at
https://www.bwi.uni-stuttgart.de/studium/pdfs/Zitierrichtlinien.pdf.

The seminar presentation should not be longer than 45 minutes. 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.