

Hand-out Behavioural Operations Management

WS 2021/2022, version: 18 October 2021

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.

Technicalities

One semester course, taught every second semester in the winter term.

Six credit points; on average, four contact hours per week. Taught in English.

Course coordinator and lecturer: Prof Dr Andreas Größler; tutorials: Ivan Đula and Julian Wiesner

Part of the MSc study programme in (technically oriented) business administration.

Learning objectives

After successfully finishing the course, students can:

- name and identify managerial decision-making biases;
- discuss relevant experiments in the behavioural operations management literature;
- understand and evaluate improvement guidelines for operations' decision-making;
- design simple experiments in the realm of dynamic decision making.

Content

The course discusses managerial decision-making, cognition, and biases from an operations point of view, i.e. not only decision-making in high-level management teams are considered but also decision-making on the shop floor. The effects of behavioural factors on organisational value creation processes is in the centre of interest. Experiments on the topic are presented. Students learn about simple experiments to investigate dynamic decision making.

Timetable

Lectures will take place on Mondays (as indicated in the timetable) at 3:45 pm in lecture hall M 17.91.

| Date | Topic | Reading assignment |
|-------------------------------------|---|-----------------------------|
| <i>Introduction and foundations</i> | | |
| 25/10/2021 | Introduction to department and to the course; course logistics; definition of behavioural operations management | |
| 08/11/2021 | Foundations of behavioural operations management | Bendoly et al., 2015, ch. 1 |
| 15/11/2021 | Laboratory and field experiments as primary investigation methods | Bendoly et al., 2015, ch. 2 |

| <i>Decision-making and behaviour in systems</i> | | |
|---|---|------------------------------|
| 22/11/2021 | Constraints and variability: design and effects of production lines and queuing systems | Gupta&Boyd, 2008 |
| 29/11/2021 | Randomness and deterministic chaos in operations performance | Franco-Santos& Otley, 2018 |
| 06/12/2021 | Complexity: adapting operations strategies and endogenous demand | Huang&Liu, 2015 |
| <i>Isolated decisions and behaviour</i> | | |
| 13/12/2021 | Cognition: the Newsvendor task and other inventory settings | Schweitzer&Cachon, 2000 |
| 20/12/2021 | Intuition: demand forecasting, problem-solving, and entrepreneurship | Belvedere&Goodwin, 2017 |
| 10/01/2022 | Personality: controlling complex inventory systems and “positive” psychology | Strohhecker& Größler, 2013 |
| <i>Nested decisions and behaviour</i> | | |
| 17/01/2022 | Group decision-making in improvement projects | Bruccoleri et al., 2016 |
| 24/01/2022 | Fairness and trust: management of supply networks | Jokela&Söderman, 2017 |
| 31/01/2022 | Societal and cultural embedding of operations, sustainability | Price&Sun, 2017 |
| <i>Interventions and conclusion</i> | | |
| 07/02/2022 | Change management and organizational interventions; outlook | Bendoly et al., 2015, ch. 19 |

Please read the chapter/article indicated *before* the lecture.

Plan of tutorials

Tutorials will take place on Mondays (as indicated in the timetable) at 8:00 am in lecture hall M 17.81.

| Date | Topic | Laptop needed? |
|-------------|--|-----------------------|
| 15/11/2021 | Stanford Prison Experiment | No |
| 22/11/2021 | Jewelry restoration | No |
| 29/11/2021 | Statapult competition | No |
| 06/12/2021 | Furniture manufacturing case | No |
| 13/12/2021 | Humanitarian logistics: “Kicking the mean habit” | Yes |
| 20/12/2021 | Clean start | Yes |
| 10/01/2022 | Sharing the risk | Yes |
| 17/01/2022 | Stickle Bricks production line | No |
| 24/01/2022 | Salt Seller Game | Yes |
| 31/01/2022 | Coffee value chain | No |
| 07/02/2022 | Q&A | No |

Examination

Assessment will be carried out by means of a written exam. In total, 50% of all points are necessary to pass the course with 6 credit points. The content of the exam comprises all topics discussed in class or in

the required reading assignments (see timetable). Participating in the tutorials is expected from all students and at least one exam question will cover a topic from the tutorials.

Mandatory literature

Belvedere, V., P. Goodwin (2017): The influence of product involvement and emotion on short-term product demand forecasting. *International Journal of Forecasting* **33**(3), 652–661.

Bendoly, E., W. van Wezel, D.G. Bachrach (eds.)(2015): *Handbook of Behavioral Operations Management*, Oxford University [chs. 1, 2, 19].

Bruccoleri, M., F. Riccobono, A. Größler (2016): Groupthink and Project Performance: the influence of personal traits and interpersonal ties. *Production and Operations Management* **25**(4), 609–629.

Franco-Santos, M., D. Otley (2018): Reviewing and theorizing the unintended consequences of performance management systems. *International Journal of Management Reviews* **20**(3), 696–730.

Gupta, M.C., L.H. Boyd (2008): Theory of Constraints: a theory for operations management. *International Journal of Operations & Production Management* **28**(10), 991–1012.

Huang, T., Q. Liu (2015). Strategic Capacity Management when Customers have Boundedly Rational Expectations. *Production and Operations Management* **24**(12), 867–879.

Jokela, P., A. Söderman (2017): Re-examining the link between fairness and commitment in buyer-supplier relationships. *Journal of Purchasing and Supply Management* **23**(4), 268–279.

Price, J. M., W. Sun (2017): Doing good and doing bad: The impact of corporate social responsibility and irresponsibility on firm performance. *Journal of Business Research* **80**, 82–97.

Schweitzer, M.E., G.P. Cachon (2000): Decision Bias in the Newsvendor Problem with a Known Demand Distribution: Experimental evidence. *Management Science* **46**(3), 404–420.

Strohhecker, J. and A. Größler (2013): Do Personal Traits Influence Inventory Management Performance? – The case of intelligence, personality, interest and knowledge. *International Journal of Production Economics* **142**(3), 37–50.

Additional Literature

Baines, T., S. Mason, P.O. Siebers, J. Ladbrook (2004): Humans: the missing link in manufacturing simulation? *Simulation Modelling Practice and Theory* **12**(7), 515–526.

Bhattacharya, C.B., S. Sen (2004): Doing Better at Doing Good: When, why, and how consumers respond to corporate social initiatives. *California Management Review* **47**(1), 9–24.

Boudreau, J., W. Hopp, J.O. McClain, L.J. Thomas (2003): On the Interface between Operations and Human Resources Management. *Manufacturing & Service Operations Management* **5**(3), 179–202.

Donohue, K., E. Katok, S. Leider (eds.)(2019): *The Handbook of Behavioral Operations*, Wiley.

Forsythe, R., J.L. Horowitz, N.E. Savin, M. Sefton (1994). Fairness in Simple Bargaining Experiments. *Games and Economic Behavior* **6**, 347–369.

Frederick, S. (2005): Cognitive Reflection and Decision Making. *Journal of Economic Perspectives* 19(4), 25–42.

Jackson, S., J.R. Wilson, B.L. MacCarthy (2004): A New Model of Scheduling in Manufacturing: Tasks, roles, and monitoring. *Human factors* 46(3), 533–550.

Langer, E.J. (1975): The Illusion of Control. *Journal of Personality and Social Psychology* 32(2), 311–328.

Pasin, F., H. Giroux (2011): The Impact of a Simulation Game on Operations Management Education. *Computers & Education* 57(1), 1240–1254.

Zuffo, R.G. (2011): Taylor is Dead, Hurray Taylor! The "Human Factor" in Scientific Management: Between ethics, scientific psychology and common sense. *Journal of Business and Management* 17(1), 23–41.