Ph.D. Course on Significance, Impact, and Relevance LMU 2025 –Course Syllabus

LECTURER

Prof. Dr. Dr. h.c. Sönke Albers
Distinguished Research Professor of Marketing and Innovation
Email: soenke.albers@klu.de
Website: https://www.klu.org/faculty-research/faculty/resident-faculty/soenke-albers

Sönke Albers has published and edited 20 books and more than 200 articles, among others, in Marketing Science, Journal of Marketing Research, International Journal of Research in Marketing, Journal of the Academy of Marketing Science. He was winner of the ISMS-MSI Practice Prize Competition and awarded with the European Marketing Academy Distinguished Scholar Award and the Lifetime Achievement Award of the Selling & Sales Management Special Interest Group (Sales SIG) of the American Marketing Association. He has served as president of the Verband der Hochschullehrer für Betriebswirtschaft.

COURSE Outline

Date and Rooms	Time	Topic
		I offer individual zoom meetings shortly after the assignment to a topic in order to give an introduction to the aspects and literature of the topic
November 26 09:00-15:00: Room 329 (Ludwigstr. 28RG) 15:00-16.30: Think Tank (Room 332, Ludwigstr. 28RG)	09:00 - 10:30 10:45 - 12:15 13:00 - 14:30 15:00 - 16:30 from 19:00	1. What do we want to know (what is=facts; whether there is a relationship, why there is a relationship=theory; impact of relationship) 2. Inductive research (case study) versus deductive research (theory testing) 3. Experiments, pre-registration, difference-in-difference 4. What can be concluded from statistical significance? Joint Dinner with interested participants (self-pay)
November 27 Think Tank (Room 332, Ludwigstr. 28RG)	09:00 - 10:30 10:45 - 12:15 13:00 - 14:30 14:45 - 16:15	5. Threats of true results and robustness checks (e.g., sampling; control variables; nonlinearity) 6. Endogeneity 7. Specification curve 8. Impact of Variables in Machine Learning
November 28 Room 329 (Ludwigstr. 28RG)	09:00 - 10:30 10:45 - 12:15 13:00 - 14:30 14:45 - 16:15	9. Replications 10. Meta-analyses and effect size measures 11. Relevance and Rigor for Science and Practice 12. Open Science

Ph.D. Course on Significance, Impact, and Relevance LMU 2025 –Course Syllabus

COURSE OBJECTIVES

In this course participants will get a basic understanding of how different goals of empirical research are realized and what kind of results can be achieved. The course is interactive with participating doctoral students presenting certain topics that are discussed intensively afterwards.

Grades (pass/fail) are provided on the basis of the presentations, the contributions in the discussions, and a two-page paper on how they would make use of the content of this course which has to be submitted until December 12. The presentations should not exceed 45 minutes. The course will provide 4 SWS towards the B1 module of the MBR.

Remarks with Respect to References

The references mentioned below should serve as a starting point. As you will only submit slides (no text), please make sure that you clearly indicate on each slide to which reference you refer. And provide the complete information of each reference on each slide.

ORGANIZATIONAL INFORMATION

Registration

Please register for the course using this online form:
https://forms.cloud.microsoft/e/WF1t4Y0Jp6

Registration will be on a first-come, first-served basis.

The **registration deadline** is**: October 31, 2025**

But earlier registration is recommended for having time for preparation

Attendance

Attendance is mandatory, but exceptions can be made if necessary. Please inform the lecturer if you cannot attend certain parts of the course (e.g., due to your own teaching).

Contact

For organizational questions about the course, please contact Susanne Adler (adler@lmu.de).

Readings

1. **What do we want to know**
   (what is=facts; whether there is a relationship, why is there a relationship=theory; impact of relationship)

- Eisend, Martin and Alfred Kuss (2019): *Research Methodology in Marketing. Theory Development, Empirical Approaches and Philosophy of Science Considerations*, Springer
- Deshpande, Rohit (1983): "Paradigms Lost": On Theory and Method in Research in Marketing, *Journal of Marketing*, 47 (4), 101- 110.
- Golder, P. N., Dekimpe, M. G., An, J. T., van Heerde, H. J., Kim, D. S., & Alba, J. W. (2023). Learning from data: An empirics-first approach to relevant knowledge generation. *Journal of Marketin*g, 87 (3), 319-336.
- Glaser, Barney G., and Anselm L. Strauss (1967). *The discovery of grounded theory: strategies for qualitative research (grounded theory)*. Taylor & Francis eBooks DRM Free Collection.
- Sutton, Robert I. and Barry M. Staw (1995): What theory is not, *Administrative Science Quarterly*, 40 (3): 371-384.
- Zeithaml, Valarie A., Bernard J. Jaworski, Ajay K. Kohli, Kapil R. Tuli, Wolfgang Ulaga, and Gerald Zaltman (2020). A theories-in-use approach to building marketing theory. *Journal of Marketing,* 84 (1): 32-51.
- Swaminathan, Vanitha, Cait Lamberton, Shrihari Sridhar, and Detelina Marinova (2023): Paradigms for Progress: An Anomaly-First Framework for Paradigm Development, *Journal of Marketing*, 87 (6), 816-825.

2. **Inductive research** (case study) **versus deductive research** (theory testing)

- Eisend, Martin and Alfred Kuss (2019): *Research Methodology in Marketing. Theory Development, Empirical Approaches and Philosophy of Science Considerations*, Springer
- Eisenhardt Kathleen M., Graebner Melissa E. (2007): Theory building from cases: opportunities and challenges, *Academy of Management Journal*, 50 (1): 25–32.
- Locke, E. A. (2007). The case for inductive theory building. *Journal of Management*, 33 (6), 867-890.
- Colquitt, Jason A., and Cindy P. Zapata-Phelan (2007). "Trends in theory building and theory testing: A five-decade study of the Academy of Management Journal." *Academy of management journal,* 50 (6): 1281-1303.
- Eisenhardt, Kathleen M., Melissa E. Graebner, and Scott Sonenshein (2016). "Grand challenges and inductive methods: Rigor without rigor mortis." *Academy of management journal*, 59 (4): 1113-1123.

3. Experiments, pre-registration, difference-in-difference

- Campbell, Donald T. and Julian C. Stanley (1963): *Experimental and Quasi-Experimental Experimentation in Research*, Houghton Mifflin, Boston et al.
- Cook, Thomas D., Donald Thomas Campbell, and William Shadish (2002): *Experimental and quasi-experimental designs for generalized causal inference*, Boston, MA: Houghton Mifflin
- Gneezy, Ayelet (2017): Field experimentation in marketing research, *Journal of Marketing Research*, 54 (1): 140-143.
- Pearl, Judea (2009): Causal inference in statistics: An overview, *Statistics surveys* 3: 96-146.
- Goldfarb, Avi, Catherine Tucker, and Yanwen Wang (2022). Conducting research in marketing with quasi-experiments. *Journal of Marketing*, 86 (3): 1-20.
- Malodia, Suresh, Amandeep Dhir, Muhammad Junaid Shahid Hasni, and Shalini Srivastava (2023). Field experiments in marketing research: a systematic methodological review. *European Journal of Marketing*, 57 (7): 1939-1965. *(Pre-registration)*
- Gonzales, Joseph E., and Corbin A. Cunningham (2015): The promise of pre-registration in psychological research, *Psychological Science Agenda*, 29 (8).
- van't Veer, Anna Elisabeth, and Roger Giner-Sorolla (2016): Pre-registration in social psychology—A discussion and suggested template. *Journal of Experimental Social Psychology* 67 (2016): 2-12.
- https://aspredicted.org/
- http://www.cogsci.nl/blog/miscellaneous/215-the-pros-and-cons-of-pre-registration-in-fundamental-research
- Roth, J., Sant'Anna, P. H., Bilinski, A., & Poe, J. (2023). What's trending in difference-in-differences? A synthesis of the recent econometrics literature. *Journal of Econometrics*, 235, 2218-2244.

4. What can be concluded from statistical significance?

- Amrhein, Valentin, Sander Greenland, Blake McShane (2019) and more than 800 signatories: Retire statistical significance, *Nature*, 567: 305-307.
- Sawyer, Alan G. and J. Paul Peter (1983): The Significance of Statistical Significance Tests in Marketing Research, *Journal of Marketing Research*, 20 (2): 122-133.
- Hubbard and Armstrong (2006) – Why We Don't Really Know What "Statistical Significance" Means: A Major Educational Failure, *Journal of Marketing Education*, 28 (2): 114-120.
- Hubbard, Raymond and R. Murray Lindsay (2013): The significant difference paradigm promotes bad science, *Journal of Business Research*, 66 (9): 1393-1397.

- Hubbard, Raymond and R. Murray Lindsay (2013): From significant difference to significant sameness: Proposing a paradigm shift in business research, *Journal of Business Research*, 66 (9): 1377-1388.
- Roberts, Seth, and Harold Pashler (2000): How persuasive is a good fit? A comment on theory testing, *Psychological Review*, 107: 358-367.
- Nuzzo, Regina (2014). "Scientific method: statistical errors." *Nature,* 506, 150-152.
- Wasserstein, Ronald L. and Nicole A. Lazar (2016). The ASA statement on p-values: context, process, and purpose. *The American Statistician,* 70 (2): 129-133.
- Brodeur, Abel, Nikolai Cook, and Anthony Heyes (2020). Methods matter: P-hacking and publication bias in causal analysis in economics. *American Economic Review*, 110 (11): 3634-3660.
- Mohajeri, Kaveh, Mostafa Mesgari, and Allen S. Lee (2020). When Statistical Significance Is Not Enough: Investigating Relevance, Practical Significance, and Statistical Significance. *MIS quarterly*, 44 (2), 525-559.
- McShane, Blakeley B., Eric T. Bradlow, John G. Lynch Jr, and Robert J. Meyer (2024). "Statistical significance" and statistical reporting: moving beyond binary." *Journal of Marketing*, 88 (3): 1-19.

5. Threats of true results and robustness checks (e.g., sampling; control variables; nonlinearity)

- Avella Medina, Marco, and Elvezio Ronchetti (2015). Robust statistics: A selective overview and new directions. Wiley Interdisciplinary Reviews: Computational Statistics 7 (6): 372-393.
- Castle, Jennifer L., Jurgen A. Doornik, and David F. Hendry (2021). "Robust discovery of regression models." *Econometrics and Statistics* 26, 31-51.
- Endogeneity see topic 6
- Panzeri, Stefano, Cesare Magri, and Ludovico Carraro (2008). "Sampling bias." *Scholarpedia* 3.9: 4258.
- Haans, Richard FJ, Constant Pieters, and Zi‐Lin He (2016). Thinking about U: Theorizing and testing U‐and inverted U‐shaped relationships in strategy research. *Strategic management journal*, 37 (7): 1177-1195.
- Li, Mingxiang (2021). "Uses and abuses of statistical control variables: Ruling out or creating alternative explanations?." *Journal of Business Research* 126: 472-488.
- Wooldridge, Jeffrey M. *Econometric analysis of cross section and panel data*. MIT press, 2010.

6. Endogeneity

- Petrin, Amil, and Kenneth Train. 2010. A Control Function Approach to Endogeneity in Consumer Choice Models. *Journal of Marketing Research,* 47 (1): 3–13
- Rossi, Peter E. (2014). "Even the rich can make themselves poor: A critical examination of IV methods in marketing applications." *Marketing Science* 33 (5): 655-672.
- Papies, Dominik, Peter Ebbes, and Elea McDonnell Feit (2022). "Endogeneity and causal inference in marketing." Available at *SSRN* 4091717.

- Ebbes, Peter, Dominik Papies, and Harald J. van Heerde (2021). "Dealing with endogeneity: A nontechnical guide for marketing researchers." *Handbook of market research*. Cham: Springer International Publishing, 181-217.

7. Specification Curve

- Leamer, E. E. (1983). Let's Take the Con Out of Econometrics. *American Economic Review*, 73(1), 31–43.
- Simmons, Joseph P., Leif D. Nelson, and Uri Simonsohn (2011): False-Positive Psychology: Undisclosed Flexibility in Data Collection and Analysis Allows Presenting Anything as Significant, *Psychological Science*, 22 (11): 1359-1366.
- Steegen, S., Tuerlinckx, F., Gelman, A., & Vanpaemel, W. (2016). Increasing Transparency Through a Multiverse Analysis. *Perspectives on Psychological Science*, 11 (5), 702–712.
- Young, C., & Holsteen, K. (2017). Model Uncertainty and Robustness: A Computational Framework for Multimodel Analysis. *Sociological Methods & Research*, 46 (1), 3–40.
- Simonsohn, Uri, Joseph P. Simmons, and Leif D. Nelson (2020). Specification curve analysis. *Nature Human Behaviour*, 4 (11), 1208-1214.
- Masur, Philipp K. & Scharkow, M. (2020). specr: Conducting and Visualizing Specification Curve Analyses. Available from https://CRAN.R-project.org/package=specr.
- Gassen J (2023). rdfanalysis: Researcher Degrees of Freedom Analysis. R package version 0.0.0.9000, https://joachimgassen.github.io/rdfanalysis.

8. Impact of Variables in Machine Learning

- Du, Mengnan, Ninghao Liu, and Xia Hu (2019). Techniques for interpretable machine learning. *Communications of the ACM,* 63 (1): 68-77.
- Carvalho, Diogo V., Eduardo M. Pereira, and Jaime S. Cardoso (2019). Machine learning interpretability: A survey on methods and metrics. *Electronics*, 8 (8): 832.
- Rudin, C., Chen, C., Chen, Z., Huang, H., Semenova, L., & Zhong, C. (2022). Interpretable machine learning: Fundamental principles and 10 grand challenges. *Statistic Surveys*, 16, 1-85.
- Molnar, Christoph, Giuseppe Casalicchio, and Bernd Bischl (2020). Interpretable machine learning–a brief history, state-of-the-art and challenges. *Joint European conference on machine learning and knowledge discovery in databases*. Cham: Springer International Publishing, also on ArXiv
- Murdoch, W. J., Singh, C., Kumbier, K., Abbasi-Asl, R., & Yu, B. (2019). Definitions, methods, and applications in interpretable machine learning. *Proceedings of the National Academy of Sciences*, 116 (44), 22071-22080.
- Inglis, Alan, Andrew Parnell, and Catherine B. Hurley (2022). Visualizing variable importance and variable interaction effects in machine learning models. *Journal of Computational and Graphical Statistics,* 31 (3): 766-778.

- Marcinkevičs, Ričards, and Julia E. Vogt (2023). Interpretable and explainable machine learning: A methods‐centric overview with concrete examples. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery, 13 (3): e1493.

9. Replications

- Bettis, Richard A., Helfat, Constance E., & Shaver, J. Myles (2016). The necessity, logic, and forms of replication. *Strategic Management Journal*, 37 (11), 2193-2203.
- Dau, Luis Alfonso, Grazia D. Santangelo, and Arjen van Witteloostuijn (2022). Replication studies in international business. *Journal of International Business Studies*, 53 (2): 215-230.
- Evanschitzky, Heiner, Carsten Baumgarth, Raymond Hubbard, and J. Scott Armstrong (2007): Replication research's disturbing trend, *Journal of Business Research*, 60 (4), 411–415
- McCullough, B.D., Kerry Anne McGeary, and Teresa D. Harrison (2008): Do economics journal archives promote replicable research? *Canadian Journal of Economics*, 41 (4), 1406-1420
- Aguinis, Herman, Wayne F. Cascio, and Ravi S. Ramani (2017): Science's reproducibility and replicability crisis: International business is not immune, *Journal of International Business Studies*, 48 (6), 653-663.
- Nuzzo, Regina (2015). Fooling ourselves. *Nature*, 526, 182-185.
- Block, Jörn H., Christian Fisch, Narmeen Kanwal, Solvej Lorenzen, and Anna Schulze (2023). Replication studies in top management journals: An empirical investigation of prevalence, types, outcomes, and impact. *Management Review Quarterly*, 73 (3): 1109-1134.

10. Meta-Analysis and effect-size measures

- Geyskens, Inge, Rekha Krishnan, Jan-Benedict E. M. Steenkamp and Paulo V. Cunha (2009): A Review and Evaluation of Meta-Analysis Practices in Management Research, *Journal of Management*, 35 (2): 393-419.
- Grewal, Dhruv, Nancy Puccinelli, and Kent B. Monroe (2018). "Meta-analysis: integrating accumulated knowledge." *Journal of the Academy of Marketing Science* 46: 9-30.
- Albers, Sönke, Murali K. Mantrala and Shrihari Sridhar (2010): A Meta-Analysis of Personal Selling Elasticities, *Journal of Marketing Research*, 47 (October): 840–853.
- Rosenthal, R. and M. R. DiMatteo (2001): META-ANALYSIS: Recent Developments in Quantitative Methods for Literature Reviews, *Annual Review of Psychology*, 52: 59–82.

11. Relevance and Rigor for Science and Practice

- Reibstein, David J., George Day, and Jerry Wind (2009): Guest Editorial: Is Marketing Academia Losing Its Way?, *Journal of Marketing*, 73 (4): 1-3.
- Lehmann, Donald R., Leigh McAlister, and Richard Staelin (2011): Sophistication in Research in Marketing, *Journal of Marketing*, 75 (4): 155-65.
- Jaworski, Bernard J. (2011): On Managerial Relevance, *Journal of Marketing*, 75 (4): 211-24.
- Wolf, Joachim and Timo Rosenberg (2012): How Individual Scholars Can Reduce the Rigor-Relevance Gap in Management Research, *BuR - Business Research*, 5 (2): 178-196.

- Deighton, John A., Carl F. Mela, and Christine Moorman (2021). Marketing thinking and doing. *Journal of Marketing,* 85 (1): 1-6.
- Varadarajan, Rajan (2020). "Relevance, rigor and impact of scholarly research in marketing, state of the discipline and outlook." *AMS Review* 10: 199-205.

12. Open Science

- Andreoli-Versbach, Patrick and Frank Mueller-Langer (2014): Open access to data: An ideal professed but not practised, *Research Policy*, 43 (9), 1621-33.
- Open Science Collaboration, Nosek, Brian A., Aarts, Alexander A., Anderson, Christopher J., Anderson, Joanna E. and Kappes, Heather Barry, (2015): Estimating the reproducibility of psychological science. *Science*, 349 (6251).
- Perrino, Tatiana, George Howe, Anne Sperling, William Beardslee, Irwin Sandler, David Shern, Hilda Pantin, Sheila Kaupert, Nicole Cano, Gracelyn Cruden, Frank Bandiera, and C. Hendricks Brown (2013): Advancing Science Through Collaborative Data Sharing and Synthesis, *Perspectives on Psychological Science*, 8 (4): 433-444.
- Nosek, Brian A., George Alter, George C. Banks, Denny Borsboom, Sara D. Bowman, Steven J. Breckler, Stuart Buck et al. (2015): Promoting an open research culture. *Science* 348 (6242), 1422-1425.
- Armeni, Kristijan, Loek Brinkman, Rickard Carlsson, Anita Eerland, Rianne Fijten, Robin Fondberg, Vera E. Heininga et al. (2021): Towards wide-scale adoption of open science practices: The role of open science communities. *Science and Public Policy*, 48 (5), 605-611.
- Banks, George C., James G. Field, Frederick L. Oswald, Ernest H. O'Boyle, Ronald S. Landis, Deborah E. Rupp, and Steven G. Rogelberg (2019): Answers to 18 questions about open science practices. *Journal of Business and Psychology,* 34 (3): 257-270.
- Aguinis, H., Banks, G. C., Rogelberg, S. G., & Cascio, W. F. (2020). Actionable recommendations for narrowing the science-practice gap in open science. *Organizational Behavior and Human Decision Processes*, 158, 27-35.
- Langham-Putrow, Allison, Caitlin Bakker, and Amy Riegelman (2021). Is the open access citation advantage real? A systematic review of the citation of open access and subscription-based articles. *PloS one* 16 (6): e0253129.
- Moreau, David, and Beau Gamble (2022). Conducting a meta-analysis in the age of open science: Tools, tips, and practical recommendations. *Psychological Methods*, 27 (3): 426-432.
- Deer, Lachlan, Susanne J. Adler, Hannes Datta, Natalie Mizik, Marko Sarstedt (2025). Toward open science in marketing research, *International Journal of Research in Marketing*, 42 (1), 212-233.