



Master Thesis

“A Case Study on AI Transformation Strategies of German Firms”

Background

Digitalization is not only a buzzword for every manager, but a crucial attempt to systematically transform a company and its business model into a digital entity. Moreover, it affects each and every industry worldwide. Hence, for staying competitive, companies have to continuously progress this digital transformation. Especially technologies based on Artificial Intelligence (AI) leverage this process and become game changers. AI has the power to change market competition completely and is already mature enough to be applied in various business contexts. This offers plenty of space for gaining competitive advantage and ceteris paribus higher profits. Nevertheless, many companies are still digital beginners facing a lot of risks and challenges. Therefore, firms need well-elaborated plans for enabling and managing continuous implementations of AI. For this AI transformation, companies create future-oriented “AI strategies” which are in-line with the overall business strategy. It will be very worthwhile to investigate AI transformation strategies of German firms regarding their characteristics, components, and differences for getting new insights into firms’ long-term plannings with AI.

Introductory Readings

- Brock, J. & von Wangenheim, F. (2019). Demystifying AI: What digital transformation leaders can teach you about realistic artificial intelligence. *California Management Review*, 61(4), 110-134. DOI: 10.1177/1536504219865226
- Borges, A.; Laurindo, F.; Spinola, M.; Goncalves, R. & Mattos, C. (2021). The strategic use of artificial intelligence in the digital era: Systematic literature review and future research. *International Journal of Information Management*, 57, Article 102225. DOI: 10.1016/j.ijinfomgt.2020.102225
- Kordon, A. (2020). Applied artificial intelligence-based systems as competitive advantage. *Proceedings of the 10th IEEE International Conference on Intelligent Systems*.

Tasks and Goals

This master thesis is closely related to the current research of the chair, and you will conduct your analyses in close collaboration with our doctoral students. The thesis will be based on case study/qualitative methodology to examine different characteristics and components of AI transformation strategies of German firms. For this, you will review relevant scientific literature on AI strategy (incl. Digital / IT strategy) and AI transformation as well as analyze company publications regarding their strategic plans with AI. Based on the information that you gather, you will create a case study for which you will search and conduct interviews with relevant partners of 2-3 self-selected companies for finding real-world evidence.

Requirements

- Good English skills as well as previous experience with strategic topics and/or AI
- Independent, reliable, and diligent working style with an eye for detail and high motivation
- Successful participation (min. grade of 2.3) in the lecture *Strategies in Multinational Enterprises (SMNE)*

Details

- Supervisors Prof. Dr. Thomas Hutzschenreuter and Tim Lämmermann
- Start Flexible / As of now
- Working time 6 months

Contact

If you are interested in writing your thesis at our chair or have questions to this topic, please contact Tim Lämmermann (tim.laemmermann@tum.de). Please send an email, including a tabular CV and your current transcript of records (one PDF file), to apply for a master thesis. We are looking forward to hearing from you!