Master Thesis

"Strategies for Gaining Competitive Advantage with AI: A Case Study Approach"

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 every industry worldwide. 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 many business opportunities for gaining competitive advantage and ceteris paribus higher profits. Nevertheless, while AI adoption is not a simple endeavor, many firms are digital beginners who struggle to effectively exploit the technology. Therefore, firms need well-elaborated strategies for adopting and exploiting valuable AI applications in their business context.

Introductory Readings

- Benbya, H., Davenport, T. H., & Pachidi, S. 2020. Artificial intelligence in organizations: Current state and future opportunities. *MIS Quarterly Executive*, 19: 9–21.

- 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.

- 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.

- Kemp, A. 2023. Competitive advantage through artificial intelligence: Toward a theory of situated AI. *Academy of Management Review*. Advance online publication.

- Krakowski, S., Luger, J., & Raisch, S. 2022. Artificial intelligence and the changing sources of competitive advantage. *Strategic Management Journal*, 44: 1425–1452.

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 a qualitative case study methodology to examine different elements of AI strategies. For this, you will review relevant scientific literature on AI, strategy, and transformation as well as conduct interviews with 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 one of our offered modules (see company webpage)

Details

- Supervisors   Prof. Dr. Thomas Hutzschenreuter and Tim Lämmermann
- Timing   Flexible / As of now for a duration of 6 months after the research exposé is accepted

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!

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