

# Information on Master's Thesis Supervision

Center for Digital Transformation/  
Global Center for Family Enterprise  
Technical University of Munich  
TUM School of Management  
TUM Campus Heilbronn

Heilbronn, February 07, 2022



# Agenda for Today

- Application Process

- Presentation of Topics

- Prof. Dr. Miriam Bird (Global Center for Family Enterprise)
- Prof. Dr. Sebastian Müller (Center for Digital Transformation)
- Prof. Dr. Philipp Lergetporer (Global Center for Family Enterprise)
- Prof. Dr. Chengguang Li (Global Center for Family Enterprise)
- Prof. Dr. David Wuttke (Center for Digital Transformation)
- Prof. Dr. Jens Förderer (Center for Digital Transformation)
- Prof. Dr. Jingui Xie (Center for Digital Transformation)
- Prof. Dr. Martin Meißner (Center for Digital Transformation)
- Prof. Dr. Michael Stich (Global Center for Family Enterprise)

- Q&A

# Contact Information

- In case you have any organizational questions eg. about the registration of your thesis or questions regarding your study progress, please contact the program management / grade management in the first place:
- E-mail: [studentcounseling\\_heilbronn@mgt.tum.de](mailto:studentcounseling_heilbronn@mgt.tum.de)

# Application Process

# Application Process

- 1) Submit the application form
- 2) Attach your application documents
  - Transcript of records
  - CV
  - Motivational Letter for the 1st preference (1 page, incl. intended use of methodology)

Via email to [office.cdt@wi.tum.de](mailto:office.cdt@wi.tum.de) (Center for Digital Transformation) or [office.gcfe@wi.tum.de](mailto:office.gcfe@wi.tum.de) (Global Center for Family Enterprise)

- Please send your application form to the center that the supervisor of your 1st preference belongs to

Application deadline: March 15, 2022!

# Application Process – Application Form



## Thesis Application Form

Center for Digital Transformation and Global Center for Family Enterprise at TUM Campus Heilbronn

Academic Year 20..../20....  winter semester  summer semester

As part of applying for your thesis, you are required to submit the filled out application form. Please hand it in along with your transcript of records and a letter of motivation for the 1st preference (max. 1 page, incl. intended use of methodology) via email to [office.cdt@wi.tum.de](mailto:office.cdt@wi.tum.de) (Center for Digital Transformation) or [office.gcfe@wi.tum.de](mailto:office.gcfe@wi.tum.de) (Global Center for Family Enterprise) by **March 15** (when writing your thesis in the summer semester) / **September 15** (when writing your thesis in the winter semester).

> Please send your application form to the center that the supervisor of your 1st preference belongs to

### Student

Name: .....	Matriculation No.: .....
Study Program/Semester: ..... / ..... Email: .....	
Requested Starting Date: .....	

Please indicate your preferences regarding Thesis Topics in the preference list below We recommend indicating at least 5 and preferably up to 10 preferences to enhance your chances of getting a topic that is among your preferences.

Preference	Topic	Supervising Professor
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		



Completed modules related to your preference list:

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Signature: ..... | ..... Date: .....

# Application Process – Thesis Guidelines



**Writing Seminar Papers and Theses  
at TUM Campus Heilbronn  
Center for Digital Transformation**

**TUM School of  
Management**

**January 2020**

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\* This document is based on the guidelines for writing scientific papers from Prof. Dr. Christoph Kaserer's Chair of Financial Management and Capital Markets and from Prof. Dr. Dr. Ann-Kristin Achleitner's KfW-Endowed Chair in Entrepreneurial Finance, TUM School of Management.

Download available here:

<https://www.wi.tum.de/prasentation-und-masterguidelines/>

Password available upon request

Prof. Dr. Miriam Bird  
Entrepreneurship and Family Enterprise



# Prof. Dr. Miriam Bird - Master's Thesis Topics in Entrepreneurship & Family Enterprise

## Overview

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Topic 1	<b>Entrepreneurial Decision-Making: Heuristics and Biases</b>
Topic 2	<b>Role of Women in Family Businesses</b>
Topic 3	<b>Entrepreneurial Team Design: The Role of Employees</b>
Topic 4	<b>Communication and Trust in Remote Working: The Role of Digital Technologies</b>

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# Prof. Dr. Miriam Bird - Master's Thesis Topics

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## Topic 1      **Entrepreneurial Decision-Making: Heuristics and Biases**

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Entrepreneurs have to solve complex problems in fast paced and uncertain situations with usually limited information available. To reduce ambiguity, humans tend to use cognitive shortcuts, also referred to as heuristics. Although there are studies on the positive consequences of decision heuristics, these cognitive simplifications are mostly negative connoted in terms of behavioural biases (see Kahneman & Tversky, 1979). The overconfidence and overoptimism bias accounts for most of the research papers in the field of entrepreneurship whereas other biases (e.g., hindsight bias or the law of small numbers) are less represented. Within this topic you should investigate how biases affect entrepreneurial decision-making in both a negative and positive way. As there usually is a strong emphasis on outcomes (e.g., performance or venture formation), it would be also interesting to additionally study the antecedents of biases (such as for instance entrepreneurs' personal characteristics, organizational and environmental aspects). You could choose one particular bias (e.g., confirmation bias) and try to explain the antecedents and consequences using an input – mediator – output framework. A possible research questions could be: How does the strength of network ties (shared attitudes and mental models, codes and trust) in a founding team (Input) enhances the occurrence of confirmation bias (Mediator) and how does this affect new venture evaluation (Output). Further, you could investigate what biases are associated with a family firm succession (e.g., status-quo-bias), especially when there is no predetermined successor. Empirically, both a quantitative or qualitative research design is possible.

### References:

- Gigerenzer, G., & Gaissmaier, W. (2011). Heuristic decision making. *Annual Review of Psychology*, 62, 451-482.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263-292.
- Montibeller, G., & von Winterfeldt, D. (2015). Cognitive and motivational biases in decision and risk analysis. *Risk Analysis*, 35(7), 1230-1251.
- Shepherd, D. A., Williams, T. A., & Patzelt, H. (2014). Thinking about entrepreneurial decision making. *Journal of Management*, 41(1), 11-46.
- Zhang, S. X., & Cueto, J. (2016). The study of bias in entrepreneurship. *Entrepreneurship Theory and Practice*, 41(3), 419-454.

# Prof. Dr. Miriam Bird - Master's Thesis Topics

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## Topic 2

## Role of Women in Family Businesses

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In family businesses, the boundaries between the firm and family are often blurred. In the case of spousal entrepreneurs, this means that the roles within the family are imprinted and transferred to the firm. Those mechanisms can strongly influence the role females take within the firm. The consequence is that roles within spousal run firms are highly gendered and females often take on the role as “caretaker” while the male takes on the role as “breadwinner”. This means that in the case of spousal entrepreneurs (i.e., spouses running a business together, this implies that females often only take on a supportive role as to help strengthen the power position of the male spouse (who often takes on the role of the CEO). Previous research has found that the female spouse therefore is often a personal consultant of the male spouse in the private as well as in the family sphere. However, literature has also found that female spouses often take on an “invisible role”.

Within this topic, you will investigate the role of females within family businesses and spousal teams. A possible focus could be to examine how the role of the female spouses within the family business has changed and how stereotypical thinking is still shaping the interactions between the male and the female spouses.

Methodology: We recommend a qualitative research design for the study (e.g. qualitative interviews with spousal teams in family businesses).

### References:

- Cesaroni, F. M., & Sentuti, A. (2014). Women and family business: When women are left only minor roles. *The History of the Family* 19(3), 358-379.
- Gillis-Donovan, J., & Moynihan-Bradt, C. (1990). The Power of Invisible Women in the Family Business. *Family Business Review* 3(2), 153-167.
- Jimenez, R. M. (2009). Research on Women in Family firms - current status and future directions. University of Jaen: *Family Business Review* 22(1), 53-64.
- Yang T, Aldrich HE. 2014. Who's the boss? Explaining gender inequality in entrepreneurial teams. *American Sociological Review* 79(2), 303-327.

# Prof. Dr. Miriam Bird - Master's Thesis Topics

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## Topic 3      **Entrepreneurial Team Design: The Role of Employees**

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Within this topic, you should investigate how start-ups strategically select their employees. In the start-up phase, the entrepreneurial team usually consists only of founders. However, the recruitment of the first employees is often critical to achieve firm growth and firm survival. The goal of the thesis should be to investigate on which premises start-up teams choose their first employees and which employment strategies prove to be especially successful. How should the first employees complement the founding team? Based on which criteria should a team select their first employees (i.e., which competences should they possess and how do they complement the entrepreneurial team)? Should an entrepreneurial team focus on recruiting specialists or rather recruit administrative staff? It would also be interesting to investigate if newly recruited employees should take over responsibility and to what extent. In short, you should investigate the strategic decisions of entrepreneurial teams in employee recruitment and at which point in time the entrepreneurial team should start complementing the entrepreneurial team. Empirically, both a quantitative or qualitative research design is possible.

### References:

- Greer, C. R., Carr, J. C., & Hipp, L. (2016). Strategic staffing and small-firm performance. *Human Resource Management*, 55(4), 741-764.
- Leung, A. (2003). Different ties for different needs: Recruitment practices of entrepreneurial firms at different developmental phases. *Human Resource Management*, 42(4), 303-320.
- Leung, A., Zhang, J., Wong, P. K., & Der Foo, M. (2006). The use of networks in human resource acquisition for entrepreneurial firms: Multiple "fit" considerations. *Journal of Business Venturing*, 21(5), 664-686.
- Sullivan, D., & Marvel, M. (2011). How entrepreneurs' knowledge and network ties relate to the number of employees in new SMEs. *Journal of Small Business Management*, 49(2), 185-206.

# Prof. Dr. Miriam Bird - Master's Thesis Topics

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## Topic 4      **Communication and Trust in Remote Working: The Role of Digital Technologies**

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Although remote work is becoming the main source of fulltime income for an increasing number of employees in Europe and U.S. (Burbano & Chiles, 2021, p. 1), little is known on how to feed the supervisor-employee relationship with trust when physicality is absent. This is surprising, given that trust (driven by the perception of ability, benevolence, and integrity; Mayer, Davis, & Schoorman, 1995) is of major importance when it comes to seed a prospective constructive behaviour in employees. In particular, literature has shed light into the role of trust “as a lubricant” which helps in diminishing the agency costs arising from extensive monitoring (Allen, George, & Davis, 2018, p. 36). Faced with the panopticon era, employees have been forced to fully embed themselves into the digital monitoring of their managerial practices (Hafermalz, 2021) and this has given rise to severe concerns on controlling and privacy outside of the workplace.

Within this topic, it would be interesting to pinpoint which kind of mechanism firms should foster to make an appropriate transition from a fully physical working world to a much digitalized one that gives room to the born of new types of employment relationships. Additionally, it could be interesting to dig deeper on how digital technologies have changed the way teams work within firm. Also, you could investigate if there are differences between family-owned businesses and non-family businesses in what concerns the way they implement remote work. For instance, a potential research question could be: Are family firms more inclined towards physical contact work than non-family ones? This topic also gives room to look more thoroughly at how remote working impacts knowledge workers, given that research has suggested the existence of particularities among these workers in comparison with other types (Mazmanian, Orlikowski, & Yates, 2013). Overall, either a qualitative or a quantitative approach are welcomed to develop a master thesis in this proposed research topic.

### Key references:

- Biron, M., & van Veldhoven, M. (2016). When control becomes a liability rather than an asset: Comparing home and office days among part-time teleworkers. *Journal of Organizational Behavior*, 37(8), 1317–1337. <https://doi.org/10.1002/job.2106>
- Hafermalz, E. (2021). Out of the panopticon and into exile: Visibility and control in distributed new culture organizations. *Organization Studies*, 42(5), 697–717. <https://doi.org/10.1177/0170840620909962>
- Mazmanian, M., Orlikowski, W. J., & Yates, J. (2013). The autonomy paradox: The implications of mobile email devices for knowledge professionals. *Organization Science*, 24(5), 1337–1357. <https://doi.org/10.1287/orsc.1120.0806>
- Orlikowski, W. J. (1992). The Duality of technology: Rethinking the concept of technology in organizations. *Organization Science*, 3(3), 398–427. <https://doi.org/10.1287/orsc.3.3.398>

Prof. Dr. Sebastian Müller  
Finance

# Prof. Dr. Sebastian Müller- Master's Thesis Topics in Finance

## Overview

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Topic 1	<b>Market Efficiency within Crypto Markets: Outperformance prediction using a pre-trained model</b>
Topic 2	<b>The influence of weather on anomaly returns</b>
Topic 3	<b>Cross-sectional Corporate Bond Return Predictability – Machine Learning Approach</b>
Topic 4	<b>Bayesian Deep Learning: Managing Price Prediction Uncertainty</b>

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# Prof. Dr. Sebastian Müller- Master's Thesis

## Topics

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### Topic 1 **Market Efficiency within Crypto Markets: Outperformance prediction using a pre-trained model**

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Supervisor: Prof. Dr. Sebastian Müller

Office hours: By Appointment

Within finance, there has been a lot of research conducted on the efficiency of stock markets. Within the last years, there has been a special focus on predictability of stock performance using Machine Learning models. For example, Chen, Pelger and Zhu (2020) achieve high Sharpe ratios using deep learning models to predict stock markets. Gu, Kelly and Xiu instead use machine learning models to measure asset risk premia and find that especially tree-based and neural network models outperform traditional approaches. While most research has been conducted on US data, there is some literature on predicting stock performance for international stocks. For example, Breitung (2021) suggests a stock ranking obtained from a random forest model and shows that investments into stocks that are favored by the model significantly outperform those that are not.

Compared to the stock market, cryptocurrency markets seem to be understudied. One of the reasons is that machine learning models usually require large training volumes. Since most cryptocurrencies were initiated within recent years, we generally lack a sufficient amount of training data for building powerful machine learning models. Within this master thesis, the student will investigate the informational efficiency within cryptocurrency markets using a stock market pre-trained random forest model, similar to the one suggested by Breitung (2021). The student will have to download cryptocurrency information via an application programming interface (supervisor will support here) and calculate the predictors needed to apply the pre-trained model. Finally, the student is expected to test different investment strategies within the cryptocurrency market to assess the informational efficiency. This exercise should also shed some light on whether patterns identified in stock markets also exist in other asset classes.

The master student will receive detailed instructions on the pre-trained random forest model and its features. The student should have a basic programming background in python and a very strong interest in Finance, cryptocurrencies and data analysis in general.

#### References:

- Chen, Luyang, Markus Pelger, and Jason Zhu. "Deep learning in asset pricing." Available at SSRN 3350138 (2020).
- Gu, Shihao, Bryan Kelly, and Dacheng Xiu. Empirical asset pricing via machine learning. No. w25398. National bureau of economic research, 2018.
- Breitung, Christian. "Automated Stock Picking using Random Forests." Available at SSRN 3978532 (2021).



# Prof. Dr. Sebastian Müller- Master's Thesis

## Topics

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### Topic 2                      **The influence of weather on anomaly returns**

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Supervisor:                      Prof. Dr: Sebastian Müller

Office hours:                      By Appointment

Sunny weather is usually associated with upbeat mood. Hirshleifer and Shumway (2003) find that sunshine is strongly positively correlated with daily stock returns. After controlling for sunshine, other weather conditions such as rain and snow are unrelated to returns. However, in research literature, the influence of weather on stock returns is controversially discussed.

The aim of this thesis is to add to the existing debate evidence by analyzing the influence of different weather states or natural catastrophes with regard to a set of different anomalies. These are long-short portfolios selected according to specific characteristics that show an abnormal return. A research question could be whether courage or the current mood is a driver for anomalies. The results can be discussed with regard to their dependency on a regions, e.g. for different financial markets or for the anomalies whether the return predictability only holds for specific anomaly categorizations.

The master student will receive data for the anomaly returns in different countries. The data for possible return predictors, the weather indicators, has to be collected during the thesis. We supervise the student on how to retrieve further data from major data providers. Basic statistical knowledge from undergraduate courses is a pre-requisite for this master thesis. Students should have a very strong interest in Finance, working with data, and learning statistical-mathematical software.

#### **References:**

- Hirshleifer, D., and Shumway, T. (2003): Good Day Sunshine: Stock Returns and the Weather. *Journal of Finance*, Vol. 58(3), 1009-1032.
- Müller, S., and Preissler, F. (2021): In Good and in Bad Times? The Relation between Anomaly Returns and Market States. Working Paper.
- Jacobs, H., and Müller, S. (2018): ...And Nothing Else Matters? On the Dimensionality and Predictability of International Stock Returns. Working Paper.

# Prof. Dr. Sebastian Müller- Master's Thesis

## Topics

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### Topic 3      **Cross-sectional Corporate Bond Return Predictability – Machine Learning Approach**

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Despite the proliferation of stock characteristics or factors to explain the cross-section of stock returns, however, far fewer studies are devoted to the expected corporate bond returns, not to mention international market. Rapach et al. (2010) find stock return predictability exists only when market is in bad times. Huang et al. (2017) propose a framework which generates stock return predictability in both bad and good times. This points out an open question whether corporate bond returns are only predictable during bad times or it can be predicted in both times.

Studies from Choi et al (2020) and Gu et al. (2020) demonstrate that the complex machine learning methods outperform linear models in predicting returns and generating profits. Given this fact, this thesis should first provide a comprehensive literature review of the predictors in international corporate bond market and construct the training and testing dataset, second investigate whether there exists asymmetric predictability in international corporate bond market using the machine learning methods in Gu et al. (2020), then give the potential explanations for the asymmetric pattern of predictability (explainable AI could be used).

#### **References:**

Huang, D., Jiang, F., Tu, J., and Zhou, G. (2017) Forecasting Stock Returns in Good and Bad Times: The Role of Market States, Working Paper.

Rapach, D.E., Strauss, J.K., and Zhou G. (2010) Out-of-sample equity premium prediction: Combination forecasts and links to the real economy. *The Review of Financial Studies*, 23(2): 821-862.

Gu, S., Kelly, B. and Xiu, D., 2020, Empirical asset pricing via machine learning. *Review of Financial Studies*, 33(5), 2223-2273.

Choi, D., Jiang, W. and Zhang, C., 2020, Alpha go everywhere: Machine learning and international stock returns. Available at SSRN: <https://ssrn.com/abstract=3489679>.

# Prof. Dr. Sebastian Müller- Master's Thesis

## Topics

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### Topic 4 **Bayesian Deep Learning: Managing Price Prediction Uncertainty**

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Supervisor: Prof. Dr: Sebastian Müller

Office hours: By Appointment

Deep learning models have proven to be powerful approaches to tackle non-linear problems. As such, research and industry have applied this technique extensively to financial markets, aiming to improve price prediction accuracy. However, model complexity makes quantification of the level of uncertainty associated with these predictions a difficult task. Bayesian statistics provides a formalism to better understand uncertainty associated with model outputs and has already been applied to deep neural networks during the recent years. The aim of the master thesis is to apply Bayesian deep learning (BDL) to stock price prediction. In a first step, the student is expected to provide a theoretical overview of the underlying mechanisms of BDL and a literature review of recent applications in the context of financial markets. Next, the benefits and challenges of BDL should be evaluated by applying it to a stock market dataset and comparing the results with those of a traditional deep learning architecture. The implementation is expected to be done in Python and Pytorch (supervisor will support here).

#### References:

- Chen, Luyang, Markus Pelger, and Jason Zhu. "Deep learning in asset pricing." Available at SSRN 3350138 (2020).
- Jospin, Laurent Valentin, et al. "Hands-on Bayesian neural networks--a tutorial for deep learning users." arXiv preprint arXiv:2007.06823 (2020).

Prof. Dr. Philipp Lergetporer  
Economics

# Prof. Dr. Philipp Lergetporer - Master's Thesis Topics in Economics

## Overview

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|---------|--|
| Topic 1 | <b>Do economic preferences predict COVID-19 vaccination intentions?</b>                            |
| Topic 2 | <b>What determines early child care participation?</b>   |
| Topic 3 | <b>Public preferences for class-size reduction in schools: Do voters appreciate the tradeoffs?</b> |
| Topic 4 | <b>Related topics via proposal</b>   |
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# Prof. Dr. Philipp Lerner - Master's Thesis

## Topics

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### Topic 1      **Do economic preferences predict COVID-19 vaccination intentions?**

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People's willingness to be vaccinated is crucial for fighting the COVID-19 pandemic. While economic preferences such as risk preferences, time preferences, or cooperative behavior should theoretically play an important role in explaining vaccination intentions, there is so far little empirical evidence for these relationships. The goal of this master's thesis is to empirically investigate the relationship between vaccination intentions and economic preferences. To this end, students are provided with a large, quota-representative dataset from an online survey that includes information on respondents' vaccination intentions as well as various measures of economic preferences. A very good command of empirical research methods and familiarity with statistical software (e.g., STATA, R) is required.

#### References:

- Mueller, S., Rau, H. A. (2021). Economic preferences and compliance in the social stress test of the COVID-19 crisis. *Journal of Public Economics*, 194, 104322.
- Campos-Mercade, P., Meier, A. N., Schneider, F. H., Wengstroem, E. (2021). Prosociality predicts health behaviors during the COVID-19 pandemic. *Journal of Public Economics*, 195, 104367.

# Prof. Dr. Philipp Lergetporer - Master's Thesis

## Topics

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### Topic 2                      **What determines early child care participation?**

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Early childhood care programs promote child development and other important life goals. However, in many countries, the uptake of child care services is far from universal. The goal of this master's thesis is to empirically investigate what are the main barriers to the use of child care by families with young children. To this end, students are provided with a novel dataset covering several hundred families with young children. The dataset includes information on children's enrollment status in child care and detailed survey responses on potential barriers to child care participation. A very good command of empirical research methods and familiarity with statistical software (e.g., STATA, R) is required.

#### **References:**

- Hermes, H., Lergetporer, P., Peter, F., Wiederhold, S. (2021). Behavioral barriers and the socioeconomic gap in child care enrollment. CESifo Working Paper 9282.
- Felfe, C., Lalive, R. (2018). Does early child care affect children's development? *Journal of Public Economics*, 159, 33–53.

# Prof. Dr. Philipp Lergetporer - Master's Thesis

## Topics

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### Topic 3 **Public preferences for class-size reduction in schools: Do voters appreciate the tradeoffs?**

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Class-size reductions are highly popular with the public, although research suggests they are an expensive and generally ineffective policy. A potential reason for the popularity of class-size reductions is that voters do not fully account for the tradeoff between class-size reduction and alternative education policies. To study this issue, students are provided with data from a quota-representative experiment in which a randomly chosen subgroup of respondents was informed about the relative costs of different education policies, including class-size reductions before stating preferences for different education policies. The goal of this master's thesis is to analyze empirically how information provision affects public support for class-size reductions. A very good command of empirical research methods and familiarity with statistical software (e.g., STATA, R) is required.

#### References:

- Hanushek, Eric A. (2002). Evidence, Politics, and the Class Size Debate. In *The Class Size Debate*, edited by Lawrence Mishel, Richard Rothstein. Washington, DC: Economic Policy Institute: 37-65.
- Lergetporer, P., Werner, K., Woessman, L. (2020). Educational inequality and public policy preferences: Evidence from representative survey experiments. *Journal of Public Economics*, 188, 104226.



# Prof. Dr. Philipp Lergetporer - Master's Thesis Topics

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Topic 4

Related topics via proposal

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Students are welcome to send their own research topic. Proposals should not exceed one DIN A4 page and should contain a clear research question in the field of Economics. Projects related to education, family enterprises, and the intersection of the two are particularly welcome. Each master thesis requires an empirical part (based on existing data or self-collected data).

Prof. Dr. Chengguang Li  
Strategic Management

# Prof. Dr. Chengguang Li - Master's Thesis Topics in Strategic Management

## Overview

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**Topic 1** Thesis topics via proposal

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Topics are discussed and decided upon together with professorship.

Prof. Dr. David Wuttke  
Supply Chain Management

# Prof. Dr. David Wuttke - Master's Thesis Topics in Supply Chain Management

## Overview

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Topic 1	<b>Sustainable Supply Chain Finance: multiple case study</b>
Topic 2	<b>Investigating the influence of Extended Reality experiences in Manufacturing and Assembly</b>

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# Prof. Dr. David Wuttke - Master's Thesis Topics

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## Topic 1      **Sustainable Supply Chain Finance: multiple case study**

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Sustainable Supply Chain Finance (SSCF) is one of the socially important concepts nowadays. Companies like BPN Paribas, Walmart, PUMA and Levi's have started practicing this concept, yet it is still emerging and not well researched. The goal of the thesis is to assess the current state of SSCF, find main variables that build SSCF and analyze how involved parties perform under SSCF. Students have to conduct case studies with 3-4 large firms that practice SSCF to derive novel insight.

### References:

- Jia, F., Zhang, T., & Chen, L. (2019). Sustainable Supply Chain Finance: Towards a Research Agenda. *Journal of Cleaner Production*, 118680. doi:10.1016/j.jclepro.2019.118680
- Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.), Sage.
- **Wuttke, D. A.**, Rosenzweig, E. D., & Heese, H. S. (2019). An empirical analysis of supply chain finance adoption. *Journal of Operations Management*, 65 (3), 242-261.
- **Wuttke, D. A.**, Blome, C., Foerstl, K., & Henke, M. (2013). Managing the innovation adoption of supply chain finance—Empirical evidence from six European case studies. *Journal of Business Logistics*, 34 (2), 148-166.

Supervisor: Begimai Marlenova

# Prof. Dr. David Wuttke - Master's Thesis Topics

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## Topic 2 **Investigating the influence of Extended Reality experiences in Manufacturing and Assembly**

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Firms are increasingly leveraging new technologies such as extended reality (XR) to minimize the complexity of work in manufacturing and assembly environments. Though early adopters of this technology have indicated operational efficiencies, these improvements are not without substantial obstacles. This thesis aims to investigate the virtues of virtual reality (VR), augmented reality (AR) and mixed reality (MR) in production, and identify the challenges involved with large scale implementation of this technology. In addition to the systematic literature research, students must conduct interviews with experts from academia and industry to get fresh perspectives.

### **References:**

- Ong S. K., Yuan M. L. & Nee A. Y. C. (2008) 'Augmented reality applications in manufacturing: a survey', *International Journal of Production Research*, 46(10), pp. 2707-2742, doi: 10.1080/00207540601064773.
- Spitzer M., Rosenberger M., Stocker A., Gsellmann I., Hebenstreit M. & Schmeja M. (2020) 'Digitizing Human Work Places in Manufacturing Through Augmented and Mixed Reality', in Keil S., Lasch R., Lindner F., & Lohmer J. (eds) *Digital Transformation in Semiconductor Manufacturing*, Cham: Springer, pp. 75-87, doi: 10.1007/978-3-030-48602-0\_8.
- Rejeb, A., Keogh, J. G., Leong, G. K., & Treiblmaier, H. (2021). 'Potentials and challenges of augmented reality smart glasses in logistics and supply chain management: a systematic literature review', *International Journal of Production Research*, 59(12), pp. 3747–3776, doi:10.1080/00207543.2021.1876942.

Prof. Dr. Jens Förderer  
Innovation and Digitalization



# Prof. Dr. Jens Förderer - Master's Thesis Topics in Innovation and Digitalization

## Overview

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Topic 1	<b>Privacy and invention in the healthcare industry – an empirical analysis</b>
Topic 2	<b>(Practice) Topic: Privacy, data sharing and value creation in platform ecosystems</b>
Topic 3	<b>Who are we talking to? – Communication Patterns in Online Social Networks</b>
Topic 4	<b>(Practice Topic): Assessing the Efficiency of Viral Marketing on Multi-Sided Platforms</b>
Topic 5	<b>The Facebook Social Connectedness Index – An Empirical Investigation</b>
Topic 6	<b>Domains and their keywords – An Empirical Investigation</b>

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# Prof. Dr. Jens Förderer - Master's Thesis Topics

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## Topic 1 **Privacy and invention in the healthcare industry – an empirical analysis**

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Privacy impairs the business model of advertising-supported internet firms. However, the impact of privacy on innovation in traditional industries is obscure. In this thesis, the student assesses with an empirical analysis the consequences of privacy on invention in healthcare. This topic implies the collection of large amounts of data from the internet and the analysis with econometric methods. Outstanding performance in the course Empirical Research Methods is recommended. Programming skills in STATA and Python are helpful.

### References:

- Goldfarb, A., & Tucker, C. (2012). Privacy and innovation. *Innovation policy and the economy*, 12(1), 65-90.
- Miller, A. R., & Tucker, C. E. (2011). Can health care information technology save babies?. *Journal of Political Economy*, 119(2), 289-324.

Supervisor: Tobias Kircher

# Prof. Dr. Jens Förderer - Master's Thesis Topics

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## Topic 2 **(Practice) Topic: Privacy, data sharing and value creation in platform ecosystems**

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Platform firms are dependent on user data in facilitating valuable interactions. However, the collection of personal information induces privacy concerns, potentially compromising user adoption. In this thesis, the student assesses with an empirical analysis the consequences of privacy on data sharing, valuable interactions and user contributions. This topic implies the execution of a field experiment in collaboration with a startup. Outstanding performance in the course Empirical Research Methods is recommended.

### References:

- Burtch, G., Ghose, A., & Wattal, S. (2015). The hidden cost of accommodating crowdfunder privacy preferences: A randomized field experiment. *Management Science*, 61(5), 949-962.
- Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. (2016). *Platform revolution: How networked markets are transforming the economy and how to make them work for you*. WW Norton & Company.

Supervisor: Tobias Kircher

# Prof. Dr. Jens Förderer - Master's Thesis Topics

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## Topic 3 **Who are we talking to? – Communication Patterns in Online Social Networks**

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Online social networks become an increasingly popular medium for communication and interaction. However, we need to understand how social media is used by private individuals, but also businesses, to derive crucial implications with respect to information dissemination. The goal of this thesis is to understand how individuals and businesses use social media regarding the creation of content, but also the reaction to others' content shared on social platforms. Using a self-selected topic and retrieving social media data, the student's task is to investigate characteristics of social media communication and interactions and derive meaningful implications based on detected patterns using e.g. social network analysis, text mining, or sentiment analysis. Programming skills in R or Python are crucial to work on this research topic, prior knowledge in network analysis is helpful.

### References:

- Khim-Yong Goh, Cheng-Suang Heng, Zhijie Lin, (2013) Social Media Brand Community and Consumer Behavior: Quantifying the Relative Impact of User- and Marketer-Generated Content. *Information Systems Research* 24(1):88-107.
- Aron Culotta, Jennifer Cutler (2016) Mining Brand Perceptions from Twitter Social Networks. *Marketing Science* 35(3):343-362.
- Yue Han, Theodoros Lappas, Gaurav Sabnis (2020) The Importance of Interactions Between Content Characteristics and Creator Characteristics for Studying Virality in Social Media. *Information Systems Research* 31(2):576-588.

Supervisor: Michaela Lindenmayr

# Prof. Dr. Jens Förderer - Master's Thesis Topics

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## Topic 4 **(Practice Topic): Assessing the Efficiency of Viral Marketing on Multi-Sided Platforms**

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Being increasingly used by consumers to take purchasing decisions, viral marketing using multi-sided platforms such as social media for marketing purposes is a common tool to increase brand awareness. The goal of this thesis is to evaluate different tactics of viral marketing and assess their efficacy with respect to corporate success. To do so, the thesis should use prior literature to assess successful marketing tactics and test the efficacy of these tactics using AB testing. To provide a promising practical application, this thesis topic is provided together with a start-up and working on this topic requires close collaboration with the team. Programming skills as well as experiences in viral marketing and AB testing are recommended, while advanced skills in the field of statistics and econometrics are required.

### References:

- Amalia R. Miller, Catherine Tucker, (2013) Active Social Media Management: The Case of Health Care. *Information Systems Research* 24(1):52-70.
- Yen-Yao Wang, Chenhui Guo, Anjana Susarla, Vallabh Sambamurthy (2021) Online to Offline: The Impact of Social Media on Offline Sales in the Automobile Industry. *Information Systems Research* 32(2):582-604.
- Tingting Nian, Arun Sundararajan (2022) Social Media Marketing, Quality Signaling, and the Goldilocks Principle. *Information Systems Research* 0(0).

Supervisor: Michaela Lindenmayr

# Prof. Dr. Jens Förderer - Master's Thesis Topics

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## Topic 5      **The Facebook Social Connectedness Index – An Empirical Investigation**

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Various forms of social networks are an everyday companion for individuals. They are shaping many social and economic decisions. To name only a few: migration, trade, job-seeking, innovation, preferences, public health, social mobility, and others. The Facebook Social Connectedness Index (SCI) offers the first time the unique opportunity to analyze friendship networks in their characteristics. In this thesis project, the student's task is to develop a research question where the SCI is your main data source to investigate a relationship of your interest. Outstanding performance in the course Empirical Research Methods in Economics and Management is recommended.

### References:

- Facebook Data for Good: Social Connectedness Index: <https://dataforgood.fb.com/tools/social-connectedness-index/>
- Bailey, M., Cao, R., Kuchler, T., Stroebel, J., & Wong, A. (2018). Social connectedness: Measurement, determinants, and effects. *Journal of Economic Perspectives*, 32(3), 259-80.
- Bailey, M., Gupta, A., Hillenbrand, S., Kuchler, T., Richmond, R., & Stroebel, J. (2021). International trade and social connectedness. *Journal of International Economics*, 129, 103418.

Supervisor: Alexander Stolte

# Prof. Dr. Jens Förderer - Master's Thesis Topics

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## Topic 6      **Domains and their keywords – An Empirical Investigation**

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Search engine keywords match individual searches with domains, and are therefore of high interest. The field of search engine optimization deals with strategies how a domain owner can improve its ranking in Google's results. Our professorship collected a rich sample of keyword and domain information describing these matching process. In this thesis project, the student's task is to develop a research question where the keyword data is your main data source to investigate an empirical relationship of your interest. Outstanding performance in the course Empirical Research Methods in Economics and Management is recommended.

### **References:**

- Decarolis, F., & Rovigatti, G. (2019). From mad men to maths men: Concentration and buyer power in online advertising.
- Ghose, A., Ipeiritis, P. G., & Li, B. (2014). Examining the impact of ranking on consumer behavior and search engine revenue. *Management Science*, 60(7), 1632-1654.

Supervisor: Alexander Stolte

Prof. Dr. Jingui Xie  
Business Analytics



# Prof. Dr. Jingui Xie - Master's Thesis Topics in Business Analytics

## Overview

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Topic 1	<b>ICU Data Analytics</b>
Topic 2	<b>Heterogeneous Treatment Effect Estimation</b>
Topic 3	<b>AI Clinician for Acute Kidney Injury (AKI)</b>
Topic 4	<b>Data-driven Optimization</b>

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# Prof. Dr. Jingui Xie - Master's Thesis Topics

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## Topic 1

## ICU Data Analytics

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In a ICU environment under increasing financial and operational stress, forecasts on patient demand patterns could help match capacity and demand and improve operations and the outcomes. The objective of the master thesis is to analyze a public ICU patient dataset (MIMIC-IV) by machine learning methods to find out the insight and predict the demands.

MIMIC ('Medical Information Mart for Intensive Care') is a large, single-center database comprising information relating to patients admitted to critical care units at the Beth Israel Deaconess Medical Center in Boston, Massachusetts. Data includes vital signs, medications, laboratory measurements, observations and notes charted by care providers, fluid balance, procedure codes, diagnostic codes, imaging reports, hospital length of stay, survival data, and more.

### References:

- Johnson, A., Pollard, T., Shen, L. et al. MIMIC-III, a freely accessible critical care database. *Sci Data* 3, 160035 (2016). <https://doi.org/10.1038/sdata.2016.35>
- Bertsimas, Dimitris, et al. "Predicting inpatient flow at a major hospital using interpretable analytics." *Manufacturing & Service Operations Management* (2021)

# Prof. Dr. Jingui Xie – Master's Thesis Topics

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## Topic 2

## Heterogeneous Treatment Effect Estimation

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The big data revolution produces new ways to leverage data to draw inference about the causal effect of a treatment, such as customize estimates for individuals. Treatment effect estimation based on population-average information may not be applicable to all populations. Actually, there could be heterogeneity across different population features. The objective of the master thesis is to focus on one specific treatment effect estimation in healthcare, for example, the treatment effect of renal replacement therapy on patients in ICU, or to further explore heterogeneous treatment effect estimation method.

### References:

- Hopp W J, Li J, Wang G. Big data and the precision medicine revolution[J]. Production and Operations Management, 2018, 27(9): 1647-1664.
- Wager S, Athey S. Estimation and inference of heterogeneous treatment effects using random forests[J]. Journal of the American Statistical Association, 2018, 113(523): 1228-1242.
- Wang G, Li J, Hopp W J. Personalized health care outcome analysis of cardiovascular surgical procedures[J]. Ross School of Business Paper, 2021 (1336).

# Prof. Dr. Jingui Xie - Master's Thesis Topics

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## Topic 3

## AI Clinician for Acute Kidney Injury (AKI)

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The Acute Kidney Injury (AKI) is a clinical syndrome characterized by the rapid (hours to days) loss of the kidney excretory function, and it is associated with mortality greater than 50%. It is typically diagnosed by the accumulation of end products of nitrogen metabolism (urea and creatine) or decreased urine output (not always present), or both. However, the best treatment strategy remains uncertain. In particular, evidence suggests that current practices in the administration of nephrotoxic medications are likely induce harm in a proportion of patients. The goal of this topic is to analyze the ICU data and try to build the prediction model for AKI. Meanwhile, you need to build a reinforcement learning framework to find the optimal treatment policy.

### References:

- Sutton R S, Barto A G. Reinforcement learning: An introduction [M]. MIT press, 2018.
- Ravichandiran S. Hands-on Reinforcement Learning with Python: Master Reinforcement and Deep Reinforcement Learning Using OpenAI Gym and TensorFlow [M]. Packt Publishing Ltd, 2018.
- Liu Y. PyTorch 1.x Reinforcement Learning Cookbook: Over 60 recipes to design, develop, and deploy self-learning AI models using Python [M]. Packt Publishing Ltd, 2019
- Masashi S. Statistical Reinforcement Learning: Modern Machine Learning Approaches [M]. Routledge press, 2015.

# Prof. Dr. Jingui Xie - Master's Thesis Topics

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## Topic 4

## Data-driven Optimization

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The traditional approach to deal with data analysis problems is to predict first, then optimize. However, the estimation procedure is separated and doesn't account for the later decision-making problems. There are also unavoidable errors. Nowadays, there is a new trend to combine both prediction and optimization. The objective is to summarize the current works in this direction, and implement several algorithms on a simple application case, for example the portfolio management problems.

### References:

- Elmachtoub, A. N., & Grigas, P. (2021). Smart “predict, then optimize”. *Management Science*.
- Zhu, T., Xie, J., & Sim, M. (2021). Joint estimation and robustness optimization. *Management Science*.

Prof. Dr. Martin Meißner  
Digital Marketing

# Master's thesis topics – Summer Semester 2022

## Professorship of Digital Marketing



Topic 1: Patreon rankings

Topic 2: Well-being and social media



Topic 3: Instagram inspiration

Topic 4: An Attention-based view on social media research

# Topic 1: Patreon rankings – Predicting success on Patreon

- Patreon allows creators to work without being reliant on advertising incomes
- Fans can pay monthly fees to their creators to gain access to exclusive content, a community, and insights into the creator's working process
- However, little is known about which factors lead to fans subscribing to creators



**Mikki Kendall** >

Writer

The reliable monthly income has made it possible for me to spend less time chasing checks and more time creating.



# Predicting success on Patreon

- What makes these creators successful?
- Can we predict creator success by investigating their expertise, trustworthiness, attractiveness, and self-disclosure?

#	Creator	Patrons	Earnings	Per patron	Days Running	Launched
1	<b>True Crime Obsessed</b> is creating podcasts of the non-garbage variety (TrueCrimeObsessed)	48,143			1447	Jan 2018
2	<b>The Tim Dillon Show</b> is creating a podcast (thetimdillonshow)	38,733	\$200,315 per month	\$5.17 per month	885	Aug 2019
3	<b>Chapo Trap House</b> is creating Chapo Trap House Podcast (chapotraphouse)	37,406	\$165,318 per month	\$4.42 per month	2065	May 2016
4	<b>DankPods</b> is creating Videos about portable music/headphones and tech junk. (dankpods)	36,325	\$39,747 per month	\$1.09 per month	662	Mar 2020
5	<b>DarkCookie</b> is creating Summertime Saga (summertimesaga) <span style="color: red;">NSFW</span>	30,224	\$76,710 per month	\$2.54 per month	1980	Aug 2016
6	<b>You're Wrong About</b> is creating a podcast (yourewrongabout)	27,550			1012	Apr 2019
7	<b>Maintenance Phase</b> is creating podcasts! (maintenancephase)	26,572			390	Dec 2020
8	<b>TMG</b> is creating the Tiny Meat Gang Podcast (tinymeatgang)	26,521			1556	Oct 2017
9	<b>Matt and Shane's Secret Podcast</b> is creating Hot Casts (MSsecretpod)	23,963			849	Sep 2019
10	<b>The Fantasy Footballers</b> is creating Fantasy Football Podcasts (thefantasyfootballers)	22,816			2337	Aug 2015
11	<b>TrueAnon Podcast</b> is creating The ONLY Anti-Pedophile Podcast fighting the Sicko Elites (TrueAnonPod)	22,727	\$92,132 per month	\$4.05 per month	907	Jul 2019
12	<b>Not Another D&amp;D Podcast</b> is creating Audio Adventures (naddpod)	21,543			1348	May 2018

# Predicting success on Patreon

- This project involves **collecting data from different sources** (e.g., Patreon rankings, attractiveness ratings, awards etc.)
- Proposed steps:
  - Review the relevant literature and select your focus variables and their proxies
  - Select a specific type of influencer on Patreon (e.g., journalists or video influencers)
  - Set up a database with the respective influencers and their success indicators (e.g., earnings, Patreons ranking)
  - Collect data about these influencers based in your focus variables
  - Using your focus variables, conduct a regression analysis to predict influencer success

# References

Patreon. (2022). Patreon. <https://www.patreon.com/>

Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, 19(3), 39–52. <https://doi.org/10.1080/00913367.1990.10673191>

Leite, F. P., & Baptista, P. de P. (2021). The effects of social media influencers' self-disclosure on behavioral intentions: The role of source credibility, parasocial relationships, and brand trust. *Journal of Marketing Theory and Practice*. <https://doi.org/10.1080/10696679.2021.1935275>

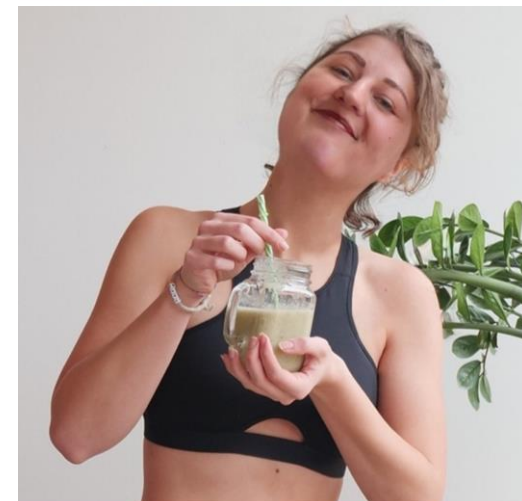
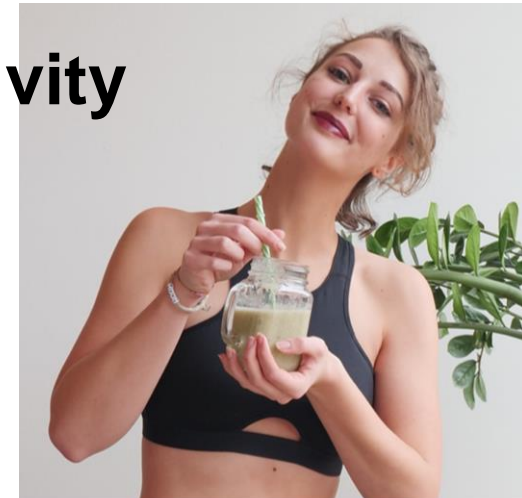
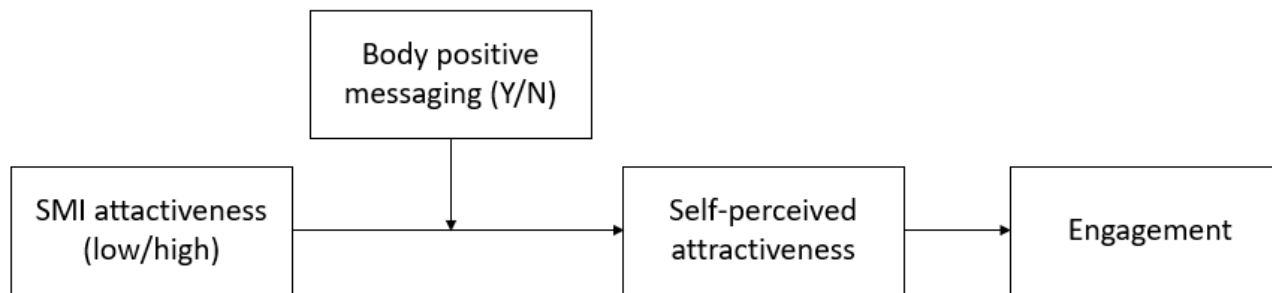
## Topic 2: Well-being and social media – Influencer attractiveness & body positivity

- Negative social comparison with influencers may lead to negative self-evaluations and reduce followers' well-being
- Follower's low self-esteem is associated with higher parasocial relationship with an influencer
- Through promoting body positivity, beauty influencers may contribute to higher body satisfaction among their users – could this lead to adverse effects for them as influencers, e.g., reduced engagement?



# Influencer attractiveness & body positivity

This study will investigate the effect of **influencer attractiveness and body positivity on follower states** (e.g., self-perceived attractiveness), feelings (para-social relationship), and engagement (e.g., eWOM)



Liked by 1.770 others
   
 anna\_smith !! Top nutrition myths !! ... more

# Influencer attractiveness & body positivity

- This project involves **collecting data using an experimental between-subjects design**
- Proposed steps:
  - Review the relevant literature and select your focus variables
  - Design an experiment, select measures, create your stimuli, set-up the experiment
  - Collect data
  - Analyse the data using mediation and moderation analysis
  - Write-up your report

# References

- Brooks, S. (2015). Does personal social media usage affect efficiency and well-being? *Computers in Human Behavior*, 46, 26–37. <https://doi.org/10.1016/j.chb.2014.12.053>
- Hawi, N. S., & Samaha, M. (2016). The Relations Among Social Media Addiction, Self-Esteem, and Life Satisfaction in University Students. *Social Science Computer Review*, March, 1–11. <https://doi.org/10.1177/0894439316660340>
- Hwang, K., & Zhang, Q. (2018). Influence of parasocial relationship between digital celebrities and their followers on followers' purchase and electronic word-of-mouth intentions, and persuasion knowledge. *Computers in Human Behavior*, 87, 155–173.
- Cohen, R., Newton-John, T., & Slater, A. (2021). The case for body positivity on social media: Perspectives on current advances and future directions. *Journal of Health Psychology*, 26(13), 2365–2373. <https://doi.org/10.1177/1359105320912450>

## Topic 3: Instagram inspiration





## Topic 3: Instagram inspiration

Fluency has strong behavioral consequences:

- Fluently processed products are liked more (King and Janiszewski 2011; Labroo et al. 2008; Lee and Labroo 2004)
- Fluently processed product designs are judged as more beautiful (Landwehr et al. 2011, 2013)
- Fluently perceived product claims are perceived as truer (Hansen et al. 2008)
- However, Labroo and Pocheptsova (2016) emphasize: “Fluency increases pleasantness by reducing uncertainty about products, but **disfluency is arousing, and as a result, increases interest and engagement with products.**”

# Topic 3: Instagram inspiration

Measuring fluency of (social media) images

**Contrast**



**Self-similarity**



## Topic 3: Instagram inspiration

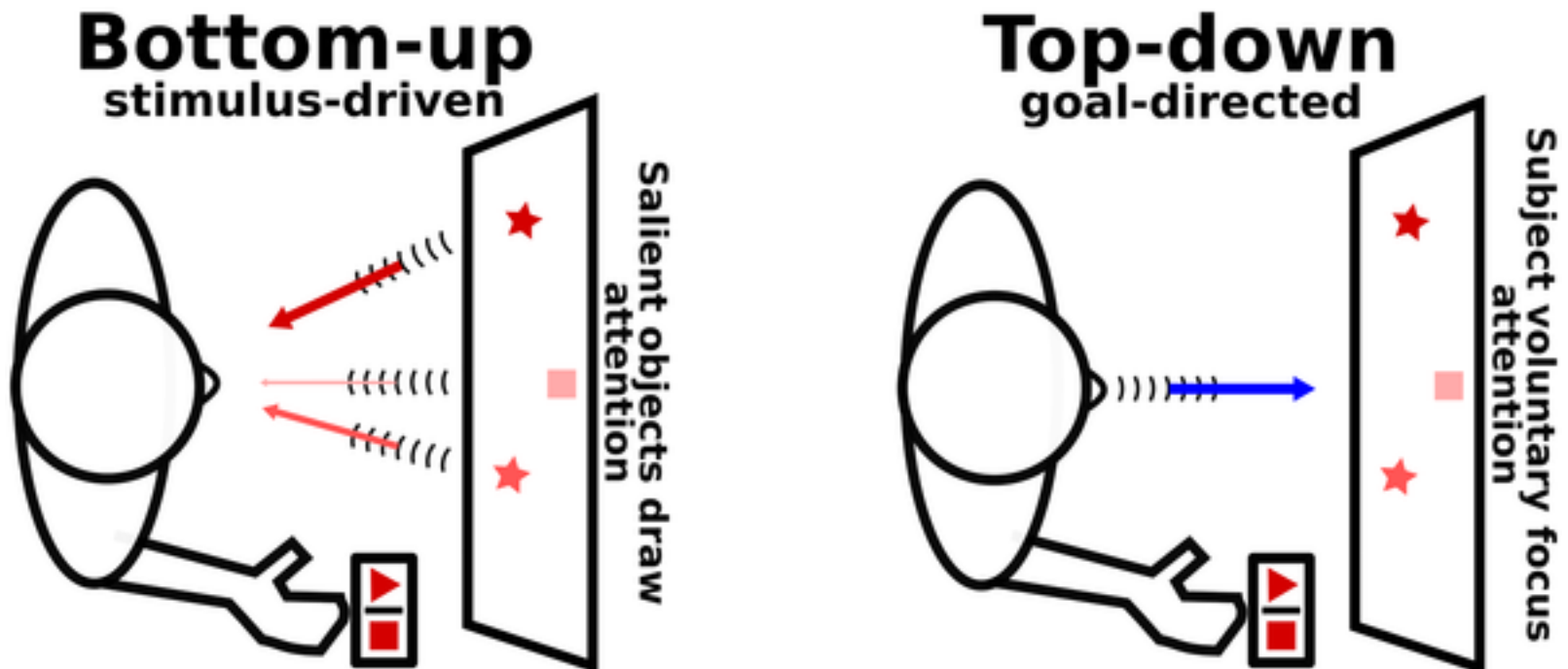
- The goal of this project is to **investigate drivers of inspiration in the social-media context**.
- Previous research suggests that the creation of disfluent social media images may create interest in social-media content.
- Your task: **Investigate empirically whether disfluency influences engagement and word-of-mouth** as well as whether the effects can be explained by changes in social media-induced inspiration.

# References

- Meier, A., Gilbert, A., Börner, S., & Possler, D. (2020). Instagram inspiration: How upward comparison on social network sites can contribute to well-being. *Journal of Communication*, 70(5), 721-743.
- Thrash, T. M., Elliot, A. J., Maruskin, L. A., & Cassidy, S. E. (2010). Inspiration and the promotion of well-being: Tests of causality and mediation. *Journal of Personality and Social Psychology*, 98(3), 488-506.
- Thrash, T. M., & Elliot, A. J. (2003). Inspiration as a psychological construct. *Journal of Personality and Social Psychology*, 84(4), 871-889.
- Zanger, V., M. Meißner, & P. Rauschnabel (2022). Beyond the gimmick: How affective responses drive brand attitudes and intentions in Augmented Reality Marketing, *Psychology & Marketing*, forthcoming.

# Topic 4: An Attention-based view on social media research

Bottom-up and top-down processes of attention



## Topic 4: An Attention-based view on social media research

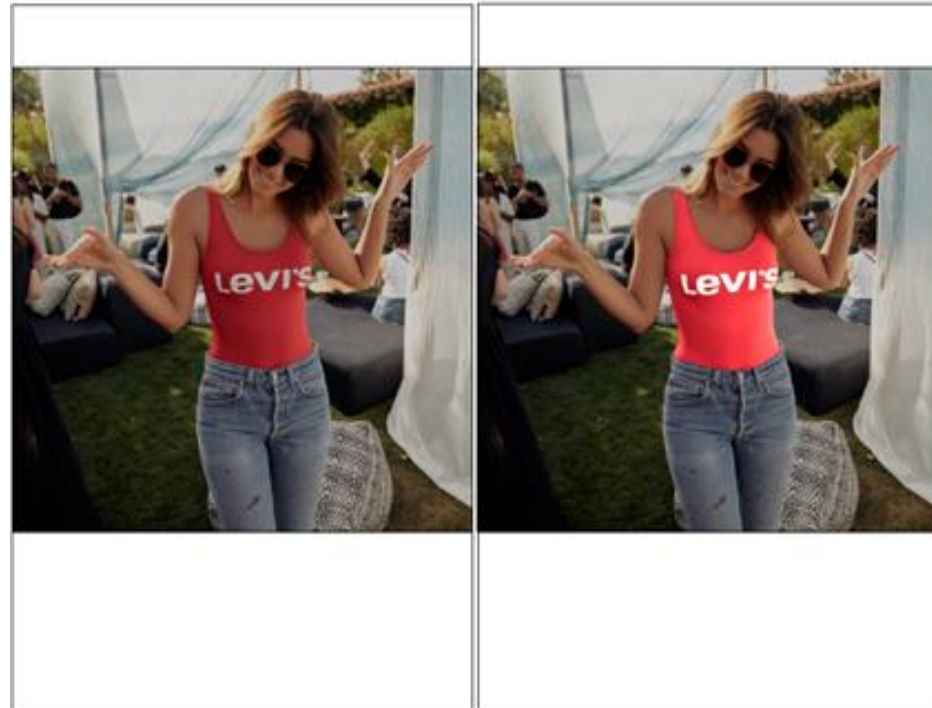
The human visual system is the outcome of an evolutionary process, one that allows humans to **respond to features in their visual environment** (Orquin et al. 2020)











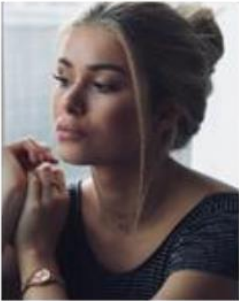



# Topic 4: An Attention-based view on social media research

However, the visual ecology of humans is a product of culture (Orquin et al. 2020).



# Topic 4: An Attention-based view on social media research

Examples for bottom-up processes that drive social-media attention

	Product size	Product centrality	Product saliency	Visual clutter	Face presence
High					
Low					



## Topic 4: An Attention-based view on social media research

- The question to which extent top-down and bottom-up processes drive information processing on social media has rarely been investigated, although Smith and Fischer (2021) highlighted that research would strongly benefit from studying attention economics in this context.
- The goal of the thesis is to **carry out a systematic literature review** on attention-related research in the social media context.
- Furthermore, based on a reflection which bottom-up and top-down processes were previously investigated, the student will **develop ideas for future research projects.**



# References

- Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science*, 48(1), 79-95.
- Meißner, M., & Oll, J. (2019). The promise of eye-tracking methodology in organizational research: A taxonomy, review, and future avenues. *Organizational Research Methods*, 22(2), 590-617.
- Orquin, J. L., & Loose, S. M. (2013). Attention and choice: A review on eye movements in decision making. *Acta psychologica*, 144(1), 190-206.
- Smith, A. N., & Fischer, E. (2021). Pay attention, please! Person brand building in organized online attention economies. *Journal of the Academy of Marketing Science*, 49(2), 258-279.

Prof. Dr. Michael Stich  
Accounting

# Prof. Dr. Michael Stich – Master's Thesis in Accounting

## Overview

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Topic 1 **Do managers of family companies perform less myopically?**

Topic 2 **Do sustainability reports really contain decision useful information?**

Topic 3 **SAP@TUM – Bringing together ESG regulations and users' needs**

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# Prof. Dr. Michael Stich – Master's Thesis in Accounting

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## Topic 1 Do managers of family companies perform less myopically?

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**Management myopia** is the phenomenon of irrational overweighting of near-term performance targets relative to long-term performance targets by the managers of a company. It is well-known that such irrational behavior can destroy corporate value. Despite decades of theoretical and empirical research, the reasons for management myopia are still not well-understood. Almost all models incorporate market participant impatience (i.e., pressure from capital markets to outperform peer companies) as a key driver of management myopia.

**Family enterprises** are characterized by specific governance and incentive structures. Strikingly, it is generally argued that the managers of family companies (e.g., companies which are effectively dominated by an owning family) experience less pressure from the owners and that managers of such companies are encouraged to focus on long-run value maximization. In other words, given these assumptions, it seems to be very unlikely that managers of family companies are forced to perform myopically.

The **objective** of this Master's Thesis is, first, to summarize the prior theoretical and empirical evidence on this topic. Second, to apply empirical metrics for investor impatience and managerial myopia to family companies and matched non-family companies. Third, to provide conclusions on the question of whether common assumptions about family companies' governance and incentive structures can reasonably be set in research and practice.

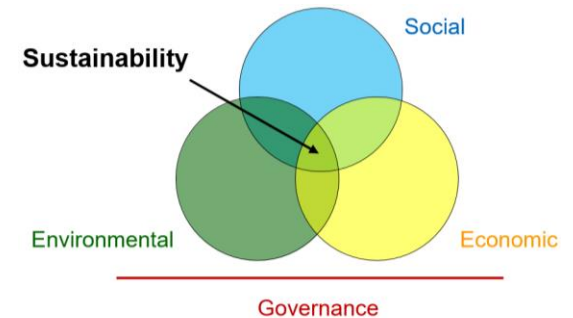
### References:

- Abarbanell, J., and V. Bernard. 2000. Is the US stock market myopic? *Journal of Accounting Research* 38 (2): 221–242.
- Bushee, B. J. 2001. Do institutional investors prefer near-term earnings over long run value? *Contemporary Accounting Research* 18 (2): 207–246.
- Gigler, F., C. Kanodia, H. Sapiro, and R. Venugopalan. 2014. How frequent financial reporting can cause managerial short-termism: An analysis of the costs and benefits of increasing reporting frequency. *Journal of Accounting Research* 52 (2): 357–387.
- Stein, J. C. 1989. Efficient capital markets, inefficient firms: A model of myopic corporate behavior. *The Quarterly Journal of Economics* 104 (4): 655–669.

# Prof. Dr. Michael Stich – Master’s Thesis in Accounting

## Topic 2 Do sustainability reports really contain decision useful information?

The steadily increasing publication of sustainability-related information (e.g., in stand-alone sustainability reports) is one of the most profound developments in corporate reporting of the last decades. In the meanwhile, **sustainability reporting** is a worldwide common practice of medium and larger companies. The key argument in favor of sustainability reporting is the provision of important information about a company’s impact on the environment and society to capital market participants and other stakeholders. Nevertheless, so-far, there is only indirect evidence that this is actually the case. Even more important, the valuation approaches applied by many users of corporate information (e.g., financial analysts) generally do not allow to directly incorporate sustainability-related information which might even point to a rather absurd conflict between theoretical assumptions and business practices.



The **objective** of this Master’s Thesis is to provide empirical evidence on the presumed **information content** (i.e., usefulness of sustainability-related information for investor decision making). Therefore, the student has to conduct in-depth analyses for a small set of sustainability reporting cases to identify the point in time when sustainability reporting was actually available to the public. Then, the student has to conduct a classic event study to draw conclusions about the information content from directly observable reactions of market participants upon the publication of the sustainability report.

### References:

- Beaver. 1968. The information content of annual earnings announcements. *Journal of Accounting Research*, 6, pp. 67–92.
- Dhaliwal, Radhakrishnan, Tsang, and Tsang. 2012. Non-financial disclosure and analyst forecast accuracy: International evidence on corporate responsibility disclosure. *The Accounting Review*, 87, pp. 723–759.

# Prof. Dr. Michael Stich – Master's Thesis in Accounting

## Topic 3 SAP@TUM – Bringing together ESG regulations and users' needs

SAP is a TUM Partner of Excellence and one of the most important cooperation partners of the TUM School of Management. In the joint research project **STEFL (SAP@TUM ESG-Finance Lab)**, the Professorship of Accounting works on a practitioner-oriented framework to identify, evaluate, and align management practices, corporate reporting, and users' needs related to a company's environmental, social, and governance (ESG) targets and activities.

We work on advancing the **SAP HANA (High Performance Analytic Appliance)** toolkit which is the most successful **enterprise resource planning (ERP)** system for complex management accounting tasks and for corporate reporting around the world. More specifically, in the current step of the joint research project, we work on aligning and integrating different ESG regulations (e.g., of the European Union's Non-Financial Reporting Directive 2014/95/EU and its proposed revised version of 2021/22) and internationally applied sustainability reporting standards (e.g., standards of the Global Reporting Initiative (GRI)).

The **objective** of this Master's Thesis is to **conceptually contribute** to this ongoing SAP@TUM research project. The specific topic of the Master's Thesis depends on the estimated starting date and working format of the Master's Thesis. Both theoretical and empirical research questions are possible. Basic conceptual and technical competences with SAP systems – in particular with SAP HANA tools – are strongly recommended.

### References:

- Van Kempen. 2019. SAP HANA 2.0: An introduction. *SAP Press*.

Supervisor: Michael Stich



Thank you for your attention  
Questions?