Empirical Sustainability Analytics

This version: May 2022

Course instructor

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Venue: TUM Campus Heilbronn

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Key facts

Instructor	Prof. Dr. Michael Stich Professor of Accounting at the TUM Campus Heilbronn
Key audience	Doctoral students of all academic departments of the TUM School of Management (maximum of 15 participants)
Embedment	Course takes place in the first week of the TUM School of Management PhD Summer Academy 2022
Registration	Via the portal of the PhD Summer Academy (deadline: July 1, 2022)
Course dates	September 12 to 16, 2022
Course venue	TUM Campus Heilbronn
Examination	30 minutes written (single choice) exam on the last course day

Application process

Goal and target audience

The goal of the doctoral course *Empirical Sustainability Analytics* is to promote an **open-minded discussion forum** for all doctoral students who are interested in more details about the techniques and perspectives of providing, using, and processing sustainability data. The focus lies on the managerial and investor evaluation of environmental, societal, and (corporate) governance characteristics (**ESG** characteristics) and their role as corporate performance and cost drivers. Following completion of the course, the participants are able to successfully analyze empirical research questions in the broad field of corporate sustainability.

The main target audience of this doctoral course are both **early and advanced doctoral students** of all academic departments of the TUM School of Management. However, also doctoral students and postdoctoral researchers of all faculties/schools of the TUM are also warmly welcome.

The only prerequisites to participate in this course is a basic (economic) understanding of **management** (e.g., company purposes and managerial responsibilities), **governance** (e.g., company organization and control structures), **markets** (e.g., company valuation by market participants), and **applied statistics** (e.g., descriptive and regression analyses). Additional skills in **statistical tools** are adjuvant advantage but not a prerequisite.

Application process

The course is limited to **15 participants**. If there are more expressions of interests than places available, the participation decisions are assigned by lot.

Please **register** via the portal of the TUM School of Management PhD Summer Academy 2022. The registration **deadline is July 1, 2022**.

For **any questions** about the content and organization of the course, please feel free to contact Carina Strohmeier (program manager, carina.strohmeier@tum.de) or Michael Stich (lecturer of the course, michael.stich@tum.de).

Course aims

What this course is

One of the greatest challenges towards a more sustainable global economy is to truly integrate sustainability policies and actions into managerial and investor decision making processes. Therefore, it is essential to adequately **recognize**, reliably **measure**, and correctly **classify** sustainability characteristics.

The theoretical and practice-oriented literatures already provide a wide set of general and specific suggestions to promote **integration of sustainability policies and actions** into decision making processes. However, there is a lack of both holistic accounting framework for sustainability characteristics and tools to **collect, measure, and aggregate** sustainability data. Therefore, the course *Empirical Sustainability Analytics*

- introduces the participants to the **overall concepts** of identifying, defining, and applying sustainability concepts in theoretical and practice-oriented empirical research,

- discusses strategies to **evaluate the internal and external validity** of qualitative and quantitative empirical approaches to study sustainability characteristics,

- provides an **interdisciplinary set of examples** of well-established and innovative concepts to empirically analyze sustainability characteristics, and

- introduces to the **collection of sustainability data** from primary (e.g., stand-alone sustainability reports) and secondary sources (e.g., commercial databases).

What this course <u>is not</u>

The course *Empirical Sustainability Analytics* is not

- a teaching unit on the general (theoretical) concepts and approaches of corporate sustainability and/or business ethics,

- a paper-writing course where the participants train how to successfully publish in scientific and practice-oriented formats,

- a course that summarizes all major techniques applied in different fields of business research related to the global movement towards a more sustainable economy, and

- a programming course that leads to customized (software) solutions for specific measurement problems.

Course objectives

Knowledge objectives

Research in various fields of sustainability has evolved to a **fragmented mainstream field** of empirical business research. Sustainability accounting, investment, management, etc. are no longer side-disciplines and researchers in this field need **joint competences** to holistically evaluate business phenomena. After passing the course, the participants are aware of several **archetypes** of empirical approaches to recognize, measure, and classify business activities. Participants acquire both knowledge about qualitative and quantitative methods to identify, process, and use financial and non-financial data related to corporate sustainability.
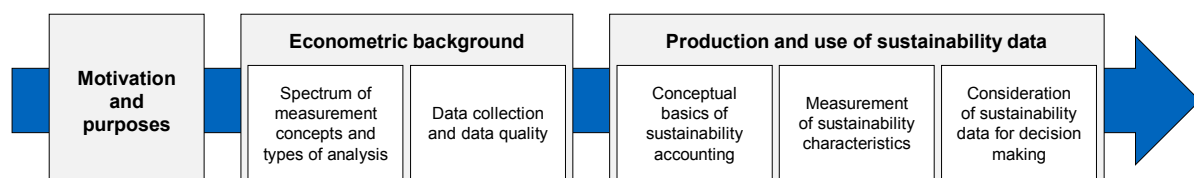
Skills objectives

The participants gain **research methodology skills** that enable them to adopt and enhance empirical approaches in the fields of accounting, finance, and management. The course enables participants to develop own innovative techniques to recognize, measure, and classify sustainability characteristics. Furthermore, the course promotes **participants' research abilities** to bring their own topic-specific competences and additional skills in empirical sustainability analytics together to **open-mindedly** work on contemporary major challenges in various fields of corporate sustainability.

Learning objectives

For both producing and evaluating sustainability research, scholars have to learn how to (self-critically) examine the relevance and rigor of sustainability research. The course introduces supportive techniques and the participants gain competences to continuously **acquire new capabilities** to enhance their own research abilities.

Preliminary schedule

The course *Empirical Sustainability Analytics* consists of a set of **short sessions** that can roughly be structured – with large contextual overlaps – into the following broader **content elements**:

Motivation and purposes	Econometric background		Production and use of sustainability data		
	Spectrum of measurement concepts and types of analysis	Data collection and data quality	Conceptual basics of sustainability accounting	Measurement of sustainability characteristics	Consideration of sustainability data for decision making

Importantly, the specific topics of the course are **not yet fixed**. The final course content is arranged based on the fields of research interests indicated by the course participants.

Core readings

There is **no mandatory list of readings**. The course introduces to several recognition and measurement concepts that have been developed in **scientific papers**. At the beginning of the course, all participants receive a basket of reading materials which also includes these scientific papers.

Assessment

The course ends with a **30 minutes written examination** on September 16, 2022. The written exam includes 10 independent **single choice assignments**.

Key dates

June 01, 2022	Announcement of the course details
July 01, 2022	Registration deadline
September 12 to 16, 2022	Course days
September 16, 2022	Examination