Empirical Sustainability Analytics

This version: May 2022

Course instructor

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Professor of Accounting

Venue: TUM Campus Heilbronn
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Key facts

| Instructor          | Prof. Dr. Michael Stich
<table>
<thead>
<tr>
<th></th>
<th>Professor of Accounting at the TUM Campus Heilbronn</th>
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<tbody>
<tr>
<td>Key audience</td>
<td>Doctoral students of all academic departments of the TUM School of Management (maximum of 15 participants)</td>
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<tr>
<td>Embedment</td>
<td>Course takes place in the first week of the TUM School of Management PhD Summer Academy 2022</td>
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<tr>
<td>Registration</td>
<td>Via the portal of the PhD Summer Academy (deadline: July 1, 2022)</td>
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<tr>
<td>Course dates</td>
<td>September 12 to 16, 2022</td>
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<td>Course venue</td>
<td>TUM Campus Heilbronn</td>
</tr>
<tr>
<td>Examination</td>
<td>30 minutes written (single choice) exam on the last course day</td>
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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 is not
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:

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

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<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>June 01, 2022</td>
<td>Announcement of the course details</td>
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<tr>
<td>July 01, 2022</td>
<td>Registration deadline</td>
</tr>
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<td>September 12 to 16, 2022</td>
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</tr>
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