

From Data to Insights: Driving Corporate Performance Course Description

Credits

6 CP / ECTS, equivalent to 4 SWS

Language

English

Responsible lecturer

Prof. Dr. Martin Artz (mac@wiwi.uni-muenster.de)

Background and relations to other courses

The ability and skill to collect, clean, merge, investigate, and interpret data has become important in practice and, in light of current developments, will likely get more important in the future. With regard to management accounting, the task at hand is to use structured and unstructured data in organizations to detect critical performance measures and performance drivers, and to identify causal relationships in firms to improve managerial decision-making and management control.

Therefore, this course covers data-driven performance measurement in modern firms with an emphasis on applied empirical methods. A particular emphasis is put on the effect of actions (value-drivers) on nonfinancial performance measures and their subsequent impact on short- and long-term financial performance. An additional focus lies on how to investigate organizational design for performance and growth. The course is based on case studies to show how data can be used to find solutions for management problems. All students are expected to do (guided) real-time programming in class using Stata as the primary software. Any pre-knowledge of the Stata software and programming language is not required.

Important:

- I. The course's number of participants is restricted to allow for an interactive teaching style in combination with real-time programming in class.
- II. Students need a software license for Stata, please have a look at the "letter of commitment" for details.
- III. Students have to apply at the Institute of Management Accounting & Control and sign a "letter of commitment".
Most recent information will be provided on the institute's website.

Main topics and learning goals

General:

The course addresses managerial problems and the use of data to find solutions for them. A broad range of topics in the area of performance management is covered, such as dealing with data issues, concepts of performance measurement and applied business statistics, as well as the empirical estimation of value drivers. Students acquire a broad range of skills related to programming, statistics, group work, and the English language. With regard to methodology, the course also prepares for doctoral studies in the area of management accounting and performance management and in accounting and business in general.

Specific topics:

Topic(s)	Content and learning goal(s)
Foundations of empirical performance measurement	Get to know conceptual models of performance measurement and value drivers.
Hypotheses testing for solving management problems	Recognize how academic approaches help management practice.
Managing data	Learn how to merge, structure, and clean data from various sources.
Case on strategy control	Understand the importance and benefits of univariate analyses (i.e., differentiated group comparisons) for decision-making support.
Case on drivers of revenues	Learn how multivariate regression analyses, including interaction effects, can be used for forecasting and resource allocation decisions.
Case on strategic value drivers and leading effects	Register how panel regression analyses foster the identification of cause-and-effects relationships in practice.
Case on structural breaks	Identify how a difference-in-difference design helps to identify successful management practices in firms.
Data analytics in practice	Understand how data analytics for business decisions are conducted today – illustrated by guest speakers.

Learning outcomes

Outcomes academic:

On successful completion of this module, students are able to

- apply fundamentals and theories regarding the measurement of performance within firms.
- consider the trade-offs that influence the interpretation and choice of performance measures.
- apply concepts of business statistics to performance management.
- differentiate between prediction and causality approaches and understand when to use which approach.
- link empirical research methods to their application in practice (in light of recent trends in data analytics).

Outcomes soft skill:

On successful completion of this module, students are able to

- conduct data management and data analyses with the standard software package STATA.
- work successfully in a team environment and present, discuss, and defend their results in front of others.
- find creative and innovative solutions for unstructured problems.
- solve unfamiliar problems based on theoretical frameworks and structured approaches.
- understand, critically reflect on, and apply findings from academic literature.
- reflect on the course content in the English language and in an international setting.

Grading

Grading is based on a written case report (relevant work or *Priifungsleistung*). Additionally, the reported solution to the case has to be presented to all participants in class (study work or *Studienleistung*). Further details will be provided during the course's sessions.

Presence

Mandatory, as detailed in the document "letter of commitment".

Recommended literature

Will be provided in class.