

**MAN 710: Research Seminar Public & Nonprofit Management**

*Chair of Public and Nonprofit Management*

Spring term 2023

Focus topic: "Applied Multivariate Data Analysis"

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## 1 Course Description

This course will introduce students to different approaches relevant to planning and implementing research in the management domain, especially within the fields of public and nonprofit management. Students will learn how to conduct quantitative empirical investigations, and how to write a scientific paper. At the end of this course, students will have the skills for doing academic work on their own, and thus, to write a quantitative-empirical master thesis at the *Chair of Public and Nonprofit Management*.

## 2 Learning Goals

By the end of the course, students will be able to:

- describe research gaps, especially related to own research projects,
- define research goals, and formulate research questions,
- search, interpret, evaluate, and select academic literature,
- select appropriate quantitative research methods for various research questions,
- write a quantitative-empirical research paper.

In this seminar, the key competence of academic, scientific research shall be acquired.

## 3 Prerequisites

To attend this course, students must have no formal prerequisites. However, having attended at least one 6XX-module out of the course offering of the *Chair of Public and Nonprofit Management* is strongly recommended.

## 4 Organizational Matters

### Registration

Please write an email to Prof. Dr. Bernd Helmig  
([bernd.helmig@uni-mannheim.de](mailto:bernd.helmig@uni-mannheim.de))  
until **February 6<sup>th</sup>, 2023**, at **noon**.

Students studying in the **M.Sc. Program Culture and Business** have to personally hand in the form "Antrag auf Übertragung (Export) der Masterarbeitsbetreuung", signed by Mr. Hempen until **February 6<sup>th</sup>, 2023**. Without this form, the registration cannot be processed.

You will receive an acceptance email by February 8<sup>th</sup>, 2023.

### Dates

Please get the details from the timetable at the end of the syllabus.

### Examination

Seminar paper – part 1 (due April 21<sup>st</sup>, 2023, noon, via ILIAS)  
Seminar paper – part 2 (due: May 29<sup>th</sup>, 2023, noon, via ILIAS)

Course materials ILIAS

Credits 6 ECTS (135 hours à 60 minutes)

- Preparation for and Attendance in the seminar = approx. 2 ECTS (45 hours)
- Seminar paper (part 1 and 2) = approx. 4 ECTS (90 hours)

## 5 Contact Details

Lecturer Prof. Dr. Bernd Helmig  
E-Mail bernd.helmig@uni-mannheim.de  
Office hours Please make an appointment via email

## 6 Grading

Seminar paper (part 1)	25%
Seminar paper (part 2)	75%
Total	100%

## 7 Course Requirements

### 7.1 General Requirements

This course is interactive and thus also based on critical conversations among lecturer and students. Discussions will be based mainly on methods literature. We will critically reflect on research designs and methods in which the theoretical knowledge will be applied. Course participants – apart from being interested in the subject per se – should be highly motivated to conduct quantitative empirical research. A strong commitment to active participation in discussions in the classroom sessions is expected. Even though knowledge of empirical research methods will help to accomplish this seminar, it is not formally required.

To successfully pass the seminar, students have to attend the classrooms sessions as scheduled in the syllabus and the “Portal2”. They are allowed to miss one block of 90 minutes. Please indicate your absence via email.

### 7.2 Seminar Topic

In this year’s research seminar on “Applied Multivariate Data Analysis”, students will work on a (fictitious) quantitative research project on their own in order to be prepared to successfully write a quantitative-empirical master thesis at the Chair of Public and Nonprofit Management.

To apply multiple viewpoints and address different research gaps, a variety of quantitative research methods will be studied in class. In particular, after the class sessions students will have to work on one particular research topic of their own choice by using and applying one (or even more) specific data analysis method which will beforehand be introduced and discussed in class.

The following multivariate data analysis methods will be part of the seminar:

Methods	Application example
Regression analysis	How does the sales volume of a product depend on price, advertising, and income?
Analysis of variance	Impact of alternative packaging designs on a product's sales volume
Discriminant analysis	Distinction of voters of different parties based on socio-demographic and psychographic characteristics
Logistic regression	Investigation of the risk of heart attacks depending on a patient's age and cholesterol level
Contingency analysis	Association between smoking and lung disease
Factor analysis	Consolidation of a multitude of variables into a lower number of factors
Cluster analysis	Identification of personality types based on psychographic characteristics
Conjoint analysis	Determine the utility contribution of product attributes to a product's overall utility to predict purchase behavior

Source: Backhaus et al. (2021), p. 14.

### 7.3 Examination Requirements

Students will conduct their own (fictitious) research endeavor consisting of a seminar paper. Based on the knowledge gained within class sessions, students will have to look for a topic of interest on their own (personally "1:1" guided by the lecturer during office times) dealing with a specific challenge in the field of public or nonprofit management. They will then have to formulate (a) research question(s), derive a research design, describe the potential data collection process, and the data analysis by explaining how to make use of the adequate data analysis technique.

*Seminar paper (part 1):* Students will write a short proposal consisting of an introduction, theoretical background, and methods to be applied (parts 1–3 of an academic paper). Students will have to follow the guidelines for academic work, as published on the website of the *Chair of Public and Nonprofit Management* ([https://www.bwl.uni-mannheim.de/media/Lehrstuehle/bwl/Helmig/Lehre/Guidelines\\_Helmig\\_Januar\\_23.pdf](https://www.bwl.uni-mannheim.de/media/Lehrstuehle/bwl/Helmig/Lehre/Guidelines_Helmig_Januar_23.pdf)). Evaluation criteria are (1) formal aspects, (2) content, (3) scientific language, and (4) reasoning. The proposal grade is 25% of the final grade. The proposal is due on April, 21<sup>st</sup> 2023, noon (upload in ILIAS). The length of the proposal should be 5 pages maximum (including figures and tables, excluding title page, references). Students will get feedback on their proposal by the lecturer. They are expected to use this feedback to improve their final seminar paper (part 2).

*Seminar paper (part 2):* Based on the written proposal, students have to write up the results of their ideas for an empirical work in a comprehensive seminar paper (15 pages including figures and tables, excluding title page, references, appendices). For this purpose, they have to include the feedback provided on the proposal, refine the methodology section, and add sections on their data analysis, discussion and conclusion. Evaluation criteria are the same as those for seminar paper part 1. Guidelines for scientific work as published on the website of the *Chair for Public and Nonprofit Management*, must be followed. Deadline for the final paper is May, 29<sup>th</sup>, 2023, noon (upload in ILIAS).

## 8 References

- Backhaus, K., Erichson, B., Gensler, S., Weiber, R., Weiber, T. (2021). *Multivariate Analysis – An Application-Oriented Introduction*. Springer Gabler.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (Eighth edition). Cengage.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2001). *Experimental and quasi-experimental designs for generalized causal inference*. Houghton Mifflin.

## 9. Timetable

Date	Time & Place	Format	Session type	Content (preliminary)
<b>Fr, 24.02.2023</b>	B2, Library Chair of Prof. Helmig	<b>Classroom session (1)</b>	Interactive Lecture	Admin, Research Gaps/Questions
Mo, 27.02.2023 – Do, 02.03.2023		Individual / Team Work	Self-Study	Research Gaps & Questions
<b>Fr, 03.03.2023</b>	B2, Library Chair of Prof. Helmig	<b>Classroom session (2)</b>	Interactive Lecture	Fundamentals of Business Re- search & Multivariate Data Anal- ysis
Mo, 06.03.2023 – Do, 16.03.2023		Individual / Team Work	Self-Study	Fundamentals of Business Re- search & Multivariate Data Anal- ysis
<b>Fr, 17.03.2023</b>	B2, Library Chair of Prof. Helmig	<b>Classroom session (3)</b>	Interactive Lecture	Multivariate Data Analysis
Mo, 20.03.2023 – Thu, 23.03.2023		Individual / Team Work	Self-Study	Multivariate Data Analysis
Mo, 20.03.2023 – Thu, 23.03.2023	Office Prof. Helmig	Individual Coach- ing Sessions (upon request)	“1:1” Coaching	Q & A on the Selection of own topic (and decision on method)
<b>Fr, 24.03.2023</b>	B2, Library Chair of Prof. Helmig	<b>Classroom session (4)</b>	Interactive Lecture	Multivariate Data Analysis
Mo, 27.03.2023 – Do, 30.03.2023		Individual / Team Work	Self-Study	Multivariate Data Analysis
Mo, 27.03.2023 – Thu, 30.03.2023	Office Prof. Helmig	Individual Coach- ing Sessions (upon request)	“1:1” Coaching	Q & A on the Selection of own topic (and decision on method)
<b>Fr, 31.03.2023</b>	B2, Library Chair of Prof. Helmig	<b>Classroom session (5)</b>	Interactive Lecture	Multivariate Data Analysis
Fr, 31.03.2023	Midnight	Theme prefer- ences, ILIAS	Submission	Decision of own topic and deci- sion on method
Mo, 17.04.2023 Thu, 20.04.2023		Individual Work	Work on own topic	Developing Seminar Paper 1
Mo, 17.04.2023 – Thu, 20.04.2023	Office Prof. Helmig	Individual Coach- ing Sessions (upon request)	“1:1” Coaching	Q & A on Writing of Seminar Pa- per 1
Fr, 21.04.2023	Noon	Examination portfolio, ILIAS	Submission	Seminar Paper Part 1
Do, 27.04.2023				Feedback of Lecturer on Seminar Paper 1
Fr, 28.04.2023 – Fr, 26.05.2023		Individual Work	Work on own topic	“Writing-Up” Seminar Paper 2
Fr, 28.04.2023 – Fr, 26.05.2023	Office Prof. Helmig	Individual Coach- ing Sessions (upon request)	“1:1” Coaching	Q & A on “Writing-Up” of Seminar Paper
Mo, 29.05.2023	Noon	Examination portfolio, ILIAS	Submission	Seminar Paper 2