

**Discipline: Methods**

**1. Language**

English

**2. Title**

Meta-Analysis for Management Research

**3. Lecturer / Referent**

Prof.dr Tammo H.A. Bijmolt

**4. Date and Location**

March 12-15, 2019; Hamburg

**5. Course Description**

5.1 Abstract and Learning Objectives

In all disciplines within management research, numerous effects have been studied multiple times, and summarizing the existing empirical findings may result in an important scientific contribution. For example, one could determine the overall effect of a particular marketing instrument (price, advertising, etc.) on sales and whether the effect depends on market characteristics, study design, or other moderators. Meta-analysis encompasses a broad set of methods to conduct a systematic, quantitative review of the literature in order to derive empirical generalizations. As such, conducting a meta-analysis is an excellent project for a PhD student or other (junior) researcher having to review the literature on a particular topic.

This workshop will deal with methods for conducting a meta-analysis. The purpose is to train the participants to conduct and publish a high-quality scientific meta-analysis within the broad field of management research. The seminar will cover the entire meta-analysis research process, from problem formulation, literature search, coding of the effects, analysis, to reporting and publishing the findings.

The emphasis is on knowledge and skills needed to conduct a meta-analysis, not only on the statistical details. All steps of the meta-analysis process (including the statistical analyses) will be demonstrated and practiced in assignments during the workshop. In addition, all topics will be illustrated by means of actual meta-analysis examples. Participants will be informed about relevant literature (textbooks and journal articles) and software supporting meta-analysis projects. In particular, most analyses will be demonstrated using R; in particular the package metafor.

## 5.2 Content

Topics that will be covered include:

- Role of replications and empirical generalizations in science
  - Why conduct a meta-analysis?
  - When to conduct a meta-analysis?
  - Identifying a topic for a meta-analysis
  - Importance of replication studies
- Overview of approaches to conduct meta-analysis
- Collecting and selecting publications
  - Coding of studies
  - Evaluating study quality
- Analyzing effect sizes:
  - Publication bias (causes, consequences, tests, corrections)
  - Type of effect sizes
  - Transformations of effects
  - Within- and between study variation
  - Homogeneity tests
  - Overview of potential moderators
  - Meta-regression, random- and fixed-effects
  - Multi-level meta-regression
  - Corrections for study artifacts
  - Structural equation modeling approach
  - Using meta-analysis methods within a single publication
- Using meta-analytic findings: the next steps in scientific progress.
- Reporting and publishing meta-analytic findings

## 5.3 Schedule (including start and end time)

This is a four-day workshop, with sessions 09.00-12.00 and 13.00-16.00 (with a short break in both sessions, and lunch 12.00-13.00) each day; except that the session on Friday afternoon ends around 14.00.

## 5.4 Course format

This workshop contains lecture-type sessions and sessions in which participants can practice and work on assignments.

## **6. Preparation and Literature**

### **6.1 Prerequisites**

Knowledge of basic statistical methods like t-tests and regression analysis is essential. Experience with the software package R would be very helpful. If a participant has no experience at all with R, it is highly recommended to take a course (e.g. on-line by Datacamp.com), read a textbook, or otherwise learn the basics of working with R.

### **6.2 Essential Reading Material**

None

### **6.3 Additional Reading Material**

The following textbook on meta-analysis is highly recommended: Borenstein, Hedges, Higgins, and Rothstein (2009), Introduction to Meta-Analysis; Wiley. In addition, a series of papers on meta-analysis will be discussed and made available during the workshop.

### **6.4 To prepare**

Install R and RStudio on your computer, and make sure that you are familiar with the basics of R, see 6.1. In addition, each participant should collect and read three articles presenting a meta-analysis in his/her own discipline.

## **7. Administration**

### **7.1 Max. number of participants**

20

### **7.2 Assignments**

Yes, multiple assignments (six) on the various steps in the meta-analysis process.

### **7.3 Exam**

Attendance, active participation, presentations, and successful finishing the assignments.

### **7.4 Credits**

6 ECTS

## 8. Workload

<b>Working Hours</b>	<b>Hours</b>
Preparations (R, meta-analysis papers)	30
Active participation	50
Completing the assignments	100
<b>TOTAL</b>	<b>180 h</b>
<b>ECTS: 6</b>	