



Course number and name: 23-31.21.212 Quantitative Research Methods - Refresher

Quantitative Research Methods for Market Strategies

Instructor: Prof. Dr. Thorsten Teichert, Dr. Haoye Sun

Winter term 2021-22

Event type: Integrated lecture + exercise

Hours per week: 3

Credits: 6.0

Language of instruction: English

Course description

This course applies a hands-on approach to market research and will enable you to conduct an empirical research project from A to Z. As a refresher course on a basic level, we will provide knowledge of widely used statistical methods and implement the corresponding applications in STATA (commands-based statistical software). The course comprises all steps from the generation of research questions to the analysis of self-collected data to the deductions of implications.

The course is designed to integrate students with different background knowledge. To better plan the contents of this course, we will evaluate students' level of statistical knowledge at the beginning of the course. We will also ask you for your expectations & interests. We will then adjust the course contents accordingly.

To better plan the content of this course, we will evaluate students' level of statistical knowledge at the beginning of the course. Students who don't have any background information of statistics can still register for this course. We will flexibly set the depth and breadth of each topic to meet the needs of the majority of the students.

In the application part, we prepared three options for students:

1. Consumer behavior under Covid-19: A current cross-cultural longitudinal study of consumer behavior during the Covid-19 pandemics serves as application case for our course. Data were collected in two Covid phases. With this novel setting, students can compare consumer behavior under different pandemic situations.
2. Implicit cognition: A game-like study to investigate consumers' implicit and explicit attitudes. Students can look into consumers' implicit as well as explicit attitude measures as well as psychological covariates.
3. Company innovation data from the Community Innovation Survey, collected by Zentrum für Europäische Wirtschaftsforschung (ZEW).

Students can choose one project to work on according to their preferences.

Course objectives and learning outcomes

The course enables students to handle and solve complex research questions in marketing and social science. Based on examples of (business) strategy students get to know complex multivariate analysis methods and how to apply them on their own. By obtaining knowledge and the ability to use statistical software packages (i.e. STATA), students also qualify to perform operational empirical analysis in a research project, consultancy, and professional practice.

By the end of the course, it is expected that students will be able to:

1. Demonstrate the ability to transform marketing problems into research hypotheses and proposal.
2. Display the ability to utilize proper measurement to collect and interpret data on (latent) variables that are relevant to address the research hypotheses.
3. Demonstrate the ability to select and utilize proper statistic tools to assess the dataset and the research hypotheses.

The skills mentioned above are key for a prospective student becoming an empirical researcher in the fields of social science, especially in market research.

Grading information

The course is designed as an interactive real-life research experience: Accordingly, the process of conducting high-quality quantitative research and its careful documentation is assessed, while positive or negative empirical findings do not influence grading. Course deliverables include a written research report (60%), presence and active participation in exercises as well as participation in a market research project including a work-in-progress presentation of the teams' project work (40%). When presenting, NO final results are expected, instead, presentations should encourage a critical discussion both about methods and contents. Presentations and obtained feedback should also be used as guidance for the final written research report (flexible length).

To pass the course, passing the research report and taking part in the exercises and the presentations is a precondition. Both parts have to be passed at least with a 4.0 in order to pass this course. Exceptions like an exam are not possible.

Course organization

The course will be held in a hybrid mode. Some lectures and exercises will be given offline (VMP 9 A514), the rest will take place online (will be announced in advance). Microsoft Teams will be used as

platform for online lectures, exercises and group works. Students are asked to install the needed course software in before of the first lecture:

VPN: <https://www.rrz.uni-hamburg.de/services/netz/vpn.html>

MS-Teams: <https://www.rrz.uni-hamburg.de/services/kollaboration/microsoft-office-365/teams.html>

STATA: <https://www.rrz.uni-hamburg.de/services/software/software-thematisch/statistik/stata.html>

Schedule

Integrated lecture and exercise *< in italics >*

1. Course introduction and overview <CW 41: October 12th 2021 >
 - Course organization & software
 - Deriving hypotheses
 - Primary and secondary data
 - Topics introduction
 - *Students built teams & (pre)select topics*

<i>Preparation: Students gain own questionnaire experience</i>
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2. Measurement instruments <CW 42: October 19th 2021>
 - *Students reflect on their personal questionnaire experience*
 - Explicit measurement instruments
 - Implicit measurement instruments (IAT)
 - Vignettes for experimental research
3. Sampling <CW 43: October 26th 2021 >
 - *Students choose their topics*
 - Measurement, errors and data for business research
 - Sampling techniques

<i>Preparation: Students conduct an exemplary data collection</i>

4. Data handling <CW 44: November 2nd 2021 >
 - Introduction into Stata
 - *Students present insights from their exemplary data collection*
5. Descriptive statistics <CW 45: November 9th 2021 >
 - Visualization: Scatter and Box-Plots
 - Outlier treatment
 - *Students derive descriptive statistics for their topics*

6. Data reduction < CW 46: November 16th 2021 >

- Scoring techniques (e.g. IAT-score)
- Factor analysis
- *Students implement data reduction for their topics*

7. Basic methods for hypothesis testing <CW 47: November 23th 2021 >

- Mean comparisons
- Analysis of variance
- *Students perform initial hypotheses tests*
- Outlook: Methods for hypothesis testing

Preparation: Students specify research idea(s) for their group project

8. Specification of research questions <CW 48: November 30th 2021>

- *Group discussions on their research topics & possible research questions*

9. Basic causal models <CW 49: December 7th 2021>

- Correlation and regression
- *Students perform initial analyses*

10. Basic segmentation and positioning techniques <CW 50: December 14th 2021 >

- Target segment strategy
- Cluster analysis
- *Students perform initial analyses*

Preparation: Students prepare their method presentations as “WIP”=work-in-progress

11. Advanced scaling techniques <CW 1: January 4th 2022 >

- Conformatory factor analysis
- *<Student presentations on basic scaling techniques>*

12. Advanced causal models <CW 2: January 11th 2022 >

- Structural equation modeling
- *<Student presentations on basic causal models>*

13. Advanced positioning techniques <CW 3: January 18th 2022 >

- Multidimensional scaling
- Correspondence analysis
- *<Student presentations on basic segmentation techniques>*

14. Complex causal-effects models <CW 4: January 25th 2022 >

- Outlook
- Wrap-Up

Literature:

- Malhotra, N. K., & Dash, S. (2016). Marketing research: An applied orientation. Pearson.
- Mazzocchi, M. (2008). Statistics for Marketing and Consumer Research (6th edition), Pearson, SAGE Publications
- Saunders, M. N. K., Lewis, P., & Thornhill, A. (2017). Research Methods for Business Students (7th edition). Pearson Education Limited