Course Specification

Hochschule Niederrhein
University of Applied Sciences

Wirtschaftswissenschaften
Faculty of Business Administration and Economics

Date: 14.03.2017

Module code:
MIM10402

Module name:
Applied Econometrics

Contact hours:
4 lecture hours per week

Credits:
5 CP

Gewichtung der Note in der Gesamtnote:
5 CP/ 120 CP

Module coordinator:
Prof. Dr. Freund

Course of study:
MIM, IMM

Intended Semester:
1 st semester

Semester frequency:
Each semester

Duration:
1 semester

Type of module:
Optional compulsory subject

Examination:
Presentation and assignment

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Prerequsites:
The students are expected to have at least basic knowledge in statistics (descriptive statistics, random variables, distribution and density functions, tests of hypotheses) and in micro-/macroeconomics.

Applicability of this module to other study programmes:
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Objectives; competencies tob e gained:
The students learn to analyse quantitative Information, to prepare (own) empirical research and to improve decision making in business. They learn to scrutinize the results of econometric studies. Therefore they are familiarized with every single step of empirical research projects and the most important statistical software applications (like STATA, SPSS or R). The students analyse empirical research questions, learn to formulate the mathematical-statistical (estimation) model and estimate these models. Especially they learn the limits and pitfalls of econometric analyses. All in all the students get empirical research competence, such as statistical-econometric competence. Teamwork fosters the social competence, reduces the prejudices and barriers which are (often) associated with statistical or empirical research and assist the critical discussion of econometric results.

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Module content:

To start the course, some important aspects of undergraduate statistics are repeated. Simultaneously the students are familiarized with a (chosen) statistical software applications (like STATA, SPSS or R). After this short introduction in basic concepts, the students learn the basics of empirical analyses, like different data sets or survey techniques. With these contents they are able to evaluate the origin and quality of data sets and could construct own survey-strategies. Based on current micro- or macroeconomic topics the interdependence between theoretical question and econometric model are discussed. Afterward the concept of linear multiple regression analyses are presented. The results are discussed along the famous "pitfalls" of regression diagnostic (endogeneity, multicollinearity, heteroscedasticity, autocorrelation). To avoid (some of) these pitfalls are more sophisticated models of econometric analyses presented.

Total workload:
Lectures: 60 hours / pre lecture 30 hours / post lecture 60 hours
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Lecturer:
Prof. Dr. Freund

Teaching method:
Seminar

Language of instruction:
English

Topics:
1. (Basic concepts of) statistic
2. Statistical software applications (like STATA, SPSS or R)
3. Survey techniques and data sets
4. Current micro- or macroeconomic topics (changes every term)
5. Multiple Regression
6. Regression diagnostic (popular pitfalls):
    a. endogeneity
    b. multicollinearity
    c. heteroscedasticity
    d. autocorrelation
7. Advanced models:
    a. binary response / multinominal data
    b. panel data sets
    c. non-linearities
    d. time series
    e. spatial regression

Literature:
Obligatory (one oft he following):

Cameron, A. Colin / Trivedi, Pravin K.: Microeconometrics using Stata, Stata Press 2010

Adkins, Lee C.:Titel: Using Stata for Principles of Econometrics, John Wiley & Sons 2011

Kohler, Ulrich / Kreuter, F.: Data Analysis using Stata, Stata Press 2012

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Additional literature (to repeat basic statistic):

Wooldridge, J. M.: Introductory Econometrics, 2008

Schira, J.: Statistische Methoden der VWL und BWL. Theorie und Praxis, 4. Aufl. 2012

Bortz, J.: Statistik – für Human- und Sozialwissenschaftler, 7. Aufl., 2010

special literature for the current topic (every term pronounced)

Misc.:
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