Course Book

Introduction to Quantitative Research Methods for Development

Winter Term 2015/16

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Chapter 1: General information

1.1 Course contents

Students, particularly as the advance in their studies, often find that the methodological tools at their command often fall short of the problems they would like to analyze. This shortcoming sometimes also hampers their ability to read and understand empirical papers in professional journals and restricts their ability to carry out more sophisticated analysis of the research issues that they have chosen to tackle. The aim of this course is to pre-empt such problems.

Specifically, this course introduces students to the basic principles of classical regression analysis and discusses modern techniques. Hands on computer exercises are designed to introduce the student to the statistical software Stata (version 13).

1.2 Overview of topics and sessions

The Simple Regression Model
Session 1: Introduction

Multiple Regression Analysis
Session 2: Estimation
Session 3: Inference
Session 4: Asymptotic Properties

First Extensions
Session 5: Further Issues
Session 6: Dummy Variables
Session 7: Heteroskedasticity
Session 8: Time Series Analysis
Session 9: Panel Data

Identification
Session 10: Specification and Data Problems
Session 11: Instrumental Variables and 2SLS

Limited Dependent Variables
Session 12: Limited Dependent Variable Models

1.3 Aims of the course

The aim of this course is to develop the quantitative skills that students need in order to conduct empirically oriented research in development studies.

Upon completion of the course, students

- are familiar with the theory and practise of standard regression analysis;
- are able to understand and critically appraise econometric results obtained by researchers in development studies; and
- are able to conduct standard econometric analysis using the statistical software Stata.

1.4 Prior knowledge

An understanding of basic mathematics and intermediate micro- and macroeconomics relationships is required. Prior knowledge in development economics is an advantage. Students without any prior knowledge in development economics may read the books by either Ray (1998) or Todaro and Smith (2006) (see below).

1.5 Credits and workload

Course credits: 5 ECTS-LP.

	Contact hours	Self-study
Lecture	28 h	48 h
Tutorial	24 h	24 h
(Preparation) final exam	2 h	24 h
Total	**150 h**	

1.6 Inscription and contact

Inscriptions via StudIP.

For questions related to the administration of this course, please contact:

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For questions related to the content of this course, please contact:

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Chapter 2: Course Set-up

2.1 Organization

This course is organized in a set of lectures and tutorials (Übungen). The lecture develops successively the main concepts and econometric theories. Different topics in development are used to illustrate basic ideas and relationships. The classes closely follow a textbook for further reading. In the tutorial students learn to implement and apply what has been discussed in the lectures. For this students solve different problem sets. The tutorial take place in the computer lab introducing the students to Stata.

2.2 Scheduling

Lecture
Room: WiWi SR027
Start lecture: 13th October 2015
End lecture: 26th January 2016

Tutorial
Room: WiWi 030
Start tutorial: 21st October 2015
End tutorial: 27th January 2016

Exam: At the end of the term (exact date to be announced)

2.3 Grade components

Final written exam, 2 hours (100%).

2.4 Reading list

Standard background reading

Gujarati, D.N., D.C. Porter (2009) Basic Econometrics (5th Edition). Boston: McGraw Hill.

Maddala, G.S. (1992) Introduction to Econometrics (2nd edn). Englewood Cliffs: Prentice Hall.

Mukherjee, C., H. White and M. Wuyts (1998) Econometrics and Data Analysis for Developing Countries. London: Routledge

Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western.

Recommended reading for students who prefer a more applied perspective

Gujarati, D. (2011) Econometrics by Example. London: Palgrave Mcmillan.

Reading on general development economics issues

Ray D. (1998), *Development Economics*. Princeton University Press: Princeton.

Todaro, M.P. and S.C. Smith (2006), *Economic Development*. (9th edn), Pearson: Essex.

2.5 Course material

- Readings
- Presentation slides (script)
- Problem set (tutorial)

The slides and problem sets will be uploaded on the course website in StudIP on the Friday prior the respective lecture and tutorial.

Chapter 3: Session details

The Simple Regression Model

Session 1: Introduction

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 2.

Multiple Regression Analysis

Session 2: Estimation

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 3.

Session 3: Inference

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 4.

Session 4: Asymptotic Properties

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 5.

First Extensions

Session 5: Further Issues

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 6.

Session 6: Dummy Variables

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 7.

Session 7: Heteroskedasticity

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 8.

Session 8: Time Series Analysis

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 10.

Session 9: Panel Data

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 13.

Identification

Session 10: Specification and Data Problems

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 9.

Session 11: Instrumental Variables and 2SLS

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 15.

Limited Dependent Variables

Session 12: Limited Dependent Variable Models

Basic reading:
Wooldridge, J.M. (2012) Introductory Econometrics: A Modern Approach (5th edn). Mason, OH: Thomson South-Western. Chapter 17.