Microeconomics and Econometrics
WS 2006/07

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Introduction

Outline

1. General Structure of Module
2. Language
3. Workload and Exam
4. Microeconomics
5. Econometrics

What About?
How Does it Work?
Structure of Lecture
Aims of Course
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About the Book and Math

1) General Structure of Module

- New structure of module; combination of…
  - Microeconomics
    - Which was taught as an elective module in the last two years as "market and price analysis"
    - Will cover about 2/3 of the workload
  - Econometrics
    - Will cover about 1/3 of the workload
- Both parts of the module will be taught quite independently from each other
  - But we will establish links, as econometrics is often used as a method to test models empirically which are based on microeconomic theory
- Handout: timetable

2) Language

- Students from various master courses
  - HU
    - Agricultural Economics
    - Agrarökonomie
    - Integrated Natural Resource Management
  - International Rural Development
  - Erasmus?
  - Others?

2) Language

- Econometrics:
  - Lectures in two language groups
  - Lab exercises in English only
- Microeconomics: English only
  - "Supporting measures": technical terms are given also in German, questions also on language are welcome
  - Reasons
    - You have to exercise it anyhow
    - Scarce resources
    - Sufficient "module supply" for international students

3) Workload and Exam

- Workload
  - 90 lecturing hours (2 hours per week econometrics, 4 hours per week microeconomics)
  - Voluntary tutorials/exercises
    - PC based econometrics (Franke): 30 hours
    - Tutorial for microeconomics (Uli Kleinwechter): 30 hours
  - Remaining time for self study: 120 hours, which is 8 hours per week
    - Most of you will need this…
- Written exam at the end of the semester

4.1) Microeconomics – What About?

- Economic explanation of the behaviour of individuals/firms
  - Example: How does potato consumption change if income increases?
- And their interaction (markets)
  - Example: why is water more expensive than beer at the train station but cheaper at Lidl?
- Including processes at sectoral level
  - Example: what happens to the wheat price in the EU in case of Romanian accession?

4.1) Microeconomics – What About?

- In contrast to
  - Macroeconomics (what happens to the € exchange rate with enlargement of the EU?)
  - Business Administration/Management ("Betriebswirtschaftslehre") (how does profitability of Bulgarian farms change in case of accession to the EU?)

4.2) Microeconomics – How Does it Work?

- Development of a theory of human behaviour (which abstracts from reality)
- Derivation of models of human behaviour which abstract from reality
  - And are therefore powerful to explain part of reality
- Testing these models
  - Testing assumptions
  - Testing the quality of predictions
  - Main instrument: econometrics

4.3) Microeconomics – Structure of the Lecture

- Look at the handout….

Known basics	**New stuff**
Supply and demand functions	Derive them from profit and utility functions
Elasticities	Conditions for sets of elasticities
Consumer and producer surplus	More precise welfare measures at the demand side
Gains from exchange	Equilibrium conditions for the economy
Price formation	Repetition & monopolistic competition, oligopoly

4.4) Aims of the Course

- Understanding of basic microeconomic theory
- Ability to apply microeconomic theory to real world problems
- How to get there?

4.5) Microeconomics – Learning Methods

- How will we do?
  - Book: Nicholson. Read!!! (how to get it…)
  - I will lecture relatively close along the book
  - Lecture:
    - Text distributed on sheets
    - Formulas and graphs for most part on the blackboard
      - Because of more appropriate speed
      - Because of more flexibility
  - Exercises and tutorial
    - Uli Kleinwechter (agree a date at the end of the lecture)
    - **Important: first try to solve the exercises on your own, than join the tutorial!**
    - We do not distribute printouts of correct solutions

4.6) Why this Book, Alternatives and a Word on Math

- Why this book
  - Good coverage
  - Well explained theory
  - Nice mixture of verbal, graphical and algebraical explanation
- Alternatives: (shown in the class)
- On math
  - Forces you to be concise in your statements
  - Allows to the practical treatment of problems:
    - It is one thing to know that the wheat supply curve is upward sloping and barley is a substitute in production
    - But "How much will wheat supply change if the wheat price increases by 10% and the barley price increases by 20%?"

5.1) Econometrics – What About?

- To measure (or estimate) the (economic) behaviour of individuals/firms
  - Example: to estimate the demand for pork in dependency on meat prices and income
- And their interaction (markets)
  - Example: interdependent models – supply and demand
- Processes in time
  - Example: time series and cointegrated markets?

5.2) Econometrics – How Does it Work?

- Types of econometric models
- Desirable properties of estimators
- Estimating and testing these models
  - Estimators
  - Measurements
  - Tests

5.3) Microeconomics – Structure of the Lecture

- The definition of an econometric model
- Regression analysis
- Time-series models
- Economic indexes
- Stochastic processes
- Regression of time series data
- Regression of interdependent models
- Cointegration
- Logit and Probit models

5.4) Aims of the Course

- Understanding of basic econometric theory
- Ability to apply statistic theory and methods
- Ability to use statistical software
- How to get there?

5.5) Econometrics – Learning Methods

- How will we do?
  - Lecture:
    - Text and formulas distributed on sheets
    - Explanations at the blackboard or computer
      - Because of more appropriate speed
      - Because of more flexibility
  - Exercises in the PC-lab

5.6) Econometrics – Literature

- **PINDYCK, R.S.; RUBINFELD, D.L.**
  Econometric Models & Economic Forecasts, New York
- **KENNEDY, Peter**
  A Guide to Econometrics, Cambridge
- **Backhaus; Erichson; Plinke; Weiber**
  Multivariate Analysemethoden, Springer-Verlag 2003
- **Eckey, H.-F.; Kosfeld, R.; Dreger, C.**
  Ökonometrie, Gabler-Verlag - Wiesbaden 2004
- **FERSCHL, F.**
  Deskriptive Statistik, Physica-Verlag - Würzburg-Wien 1978