

# Empirical Productivity Analysis (Advanced)

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**Module number:** 15052

**Lecturer:** PD Dr. Christian Growitsch

Location/Room	EWI, Vogelsanger Str. 321, 50827 Köln, KFR I
Time	November 11 and 22, 2013 and January 21, 2013, 10.00 am – 16.00 pm
Credit Points	6
Type of course	Lectures with integrated computer exercises, group work and student presentations
Course Language	English

## 1. Objectives

The course will give a theoretical and empirical overview on state-of-the-art efficiency and productivity analysis methods. The students learn to understand the theoretical foundations of empirical productivity analysis techniques and are able to apply them to practical problems.

## 2. Prerequisites

- Profound understanding of applied microeconomics
- Strong interest in empirical modelling
- Notebook with econometric software R

## 3. Relevance for study programmes

The course is open to all master and doctoral students.

## 4. Registration for master students

- The maximum number of participants is 20.
- If you are interested, please send your application including
  - the [application form](#)
  - a transcript of records and
  - your CV

**to** Dr. Heike Wetzel  
Chair of Energy Economics  
Vogelsanger Str. 321  
50827 Köln

- Only applications submitted by mail or in person during the opening times of the secretariat can be accepted.
- Students who are accepted for the seminar and registered at the examination office receive malus points for not attending the seminar or not handing in the paper.
- **Application deadline:** Friday, October 18, 2013

## **5. Contents**

- Production theory (production functions, cost functions, distance functions, elasticities, duality, etc.)
- Data Envelopment Analysis (input orientation, output orientation, constant returns to scale, variable returns to scale, etc.)
- Stochastic Frontier Analysis (Cobb-Douglas functions, translog functions, unobserved heterogeneity, consideration of environmental factors, etc.)

## **6. Seminar Format**

Lectures with integrated computer exercises, group work and student presentations

## **7. Working requirements and assessment method**

- Active participation in the computer exercises, group work and discussions
- Preparation of a short paper (due January 10, 2013) and presentation (January 21, 2013)

## **8. Teaching staff**

PD Dr. Christian Growitsch, Director of Applied Research at the EWI, and Dr. Heike Wetzel, post-doctoral researcher at the University of Cologne and affiliated researcher at the EWI

## **9. Co-ordination/Contact**

Dr. Heike Wetzel, [heike.wetzel@uni-koeln.de](mailto:heike.wetzel@uni-koeln.de)