Applied Health Economics:  
Using Econometrics to Evaluate Health Policies

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Incentives – Bavarian Graduate Program in Economics,  
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The course will focus on the use of non-experimental data to estimate causal models and evaluate ‘treatment effects’. The emphasis is on the issues that arise in health economics in finding appropriate data and reliable identification strategies, rather than on the underlying econometric theory.

**Content**

Identification strategies: finding relevant variation  
- Randomised experiments  
- Natural experiments  
- Natural controls  
- Anti-tests

Methods for dealing with unobserved heterogeneity and dependence  
- Deviations and conditional estimates  
- Numerical integration and classical simulation-based inference  
- Bayesian MCMC  
- Finite mixtures models  
- Copulas

Evaluation of treatment effects  
- Matching  
- Regression discontinuity  
- Difference-in-differences  
- Instrumental variables

**Reading material**

The main source of material is:

This is available to download as HEDG WP #07/18 at:  
[http://www.york.ac.uk/res/herc/research/hedg/wp.htm](http://www.york.ac.uk/res/herc/research/hedg/wp.htm)
The practicalities of the methods are covered by the recent book *Applied Health Economics*. This focuses on specific empirical applications to the HALS, BHPS, ECHP and other datasets. The book includes extensive discussion of the Stata code and results:


Programs and data from the book can be downloaded from:

http://www.york.ac.uk/res/herc/research/hedg/software.htm

Many of the methods covered during the course are reviewed more briefly in the following:


The following general textbooks provide useful background for the microeconometric methods:


Additional references will be given in the course material.

**Programme**

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<td>Monday 18th August</td>
<td>Overview</td>
<td>The evaluation problem in health economics</td>
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<td>Tuesday 19th August</td>
<td>Categorical choice models for panel data</td>
<td>Practical: Describing &amp; modelling the dynamics of health in the BHPS (AHE: Chapters 2, 9 &amp; 10)</td>
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<td>Wednesday 20th August</td>
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Andrew Jones

Andrew Jones is Professor of Economics at the University of York, UK, where he directs the Graduate Programme in Health Economics. He researches and publishes in the area of microeconometrics and health economics. Andrew is the research director of the Health, Econometrics and Data Group (HEDG) at the University of York, visiting professor at the University of Bergen; organiser of the annual European Workshops on Econometrics and Health Economics; joint coordinator of the ECuity III project; joint editor Health Economics; joint editor Health Economics Letters and on the editorial boards of Cuadernos Economicos de ICE, Journal of Health Economics and Population Health Metrics. He is editor of the Elgar Companion to Health Economics.

http://www.york.ac.uk/depts/econ/profiles/details/jonesa.htm