

The Analysis of Micro Data

Professor Stephan Klasen, Ph.D.
Room 63
Oeconomicum
Platz der Göttinger Sieben 3
Ph: 397303
Email: sklasen@gwdg.de
Office Hours: Tuesday 14-15:00

Teaching Assistants

Dipl.-Vw Johannes Graeb
Phone: 394878 , Email: jgraeb@uni-goettingen.de
Office hours: Wed. 14:00-15:00
OEC II – 136

Dipl. Math. Sebastian Vollmer
Phone: 398171, Email: Sebastian.Vollmer@wiwi.uni-goettingen.de
Office hours: Wed. 09:00-10:00

Winter Term 2007/2008
Lecture: Monday 14:00-16:00, ZHG 002
Tutorial: Wednesday 14:00-16:00, VG 102

This course, which will be taught in English, deals with the economic analysis of household surveys. Both the analysis of cross-sectional and panel data will be considered. Central theoretical and practical problems with the design of household surveys will be discussed. The main purpose of the course is the testing of economic hypotheses by applying statistical and microeconomic tools to such survey data. The topics covered by the lectures focus on the measurement of poverty and inequality, intrahousehold allocation of resources, incidence analysis of public expenditures and taxes, private and public safety nets, and unemployment duration.

Apart from dealing with standard econometric methods for analysing such data (OLS, fixed and random effects models, probit and logit models, models for selectivity, duration/hazard rate models) specific problems like heteroscedasticity, unobserved heterogeneity, and measurement errors will be discussed. The emphasis is, however, on applying econometric methods to the corresponding economic problems, rather than a theoretical treatment of these problems (for which students are referred courses in econometrics). Therefore, during the exercise classes, the participants are expected to analyse household data sets as well as generated data sets on PC . The exercise classes will rely on the software package "STATA" and will focus on analyses of the South African Living Standards Survey and the German Socio-Economic Panel (GSOEP).

In the tutorial (or maybe the lecture slot if there is time at the end), students will be asked to make presentations about the empirical investigation of economic problems they have dealt with in their own research. The emphasis should be on the econometric implementation and the way they used stata to solve the problem.

Outline of the course:

1. Introduction
2. The structure of microdata
3. Inequality and the measurement of poverty
4. Intrahousehold allocation of resources
5. Incidence analysis and Project Evaluation
6. Private and Public Safety Nets
7. Duration models: Application to Unemployment

Literature:

Deaton, Angus (1997): *The Analysis of Household Surveys - A Microeconomic Approach to Development Policy*. Baltimore: Johns Hopkins Press.

Greene, William H. (1997): *Econometric Analysis*, 3rd Edition. New York: Prentice-Hall

Requirements and Prerequisites:

This course is primarily for Ph.D. and Master's Students in Economics. Participants from other programs (such as the Ph.D. program at the Center of Statistics or the MA programs at the Agriculture Faculty) can also enrol, as can advanced students working towards a Diplom in VWL. Prior knowledge of basic econometrics is presumed.

To get full credit (6 credit points for students operating in the credit point system), students must successfully pass an exam at the end of the course, do a presentation in the tutorial, and produce a small research paper based on that. Deadlines for the research paper will be flexible and it is entirely possible for students to hand in work they have done for other courses or their Ph.D. if it involves the use of micro data analysis.

1. Lecture: Introduction and the Structure of Microdata

a) Overview over course:

- focus on problem-solving and applications
- requirements

b) Why and when use microdata?

- welfare questions
- basic demographic changes (fertility, marriage, household relations, etc).
- household behavior in response to economic circumstances
- measuring effects of government policies
- micro versus macro data

c) The structure of micro data

- types of micro data: single purpose, multi-purpose, cross-section, panel
- sampling issues: sampling frame, theory and practise
- strata and clusters: the advantages and disadvantages associated with stratifying and clustering, econometric problems associated with clustering and stratifying
- the problem of heteroscedasticity
- endogeneity issues
- weights: possibilities and problems
- panel data issues: representativeness, attrition, and standard errors
- repeated cross sections: the cohort approach
- the quality of survey data (income vs. expenditure, measurement error issues)
- some descriptive statistics and corrections for the clustering effects

Readings:

- 1) Deaton, ch. 1, 2
- 2) SALSS survey: Introduction, Questionnaire, Codebook
- 3) Desktop Companion to the German Socio-Economic Panel: ch. 1, 2, 4
- 4) Grün, Carola: Racial and gender wage differentials in South Africa: What can Cohort Data tell? www.wits.ac.za/sebs/downloads/cohort_data.pdf

Tutorial:

Introduction to Stata and data handling, merging, and basic analysis.

Review of econometric issues and problems: esp. heteroscedasticity, measurement error, simultaneity and instrumental variable approaches, censoring and selectivity problems,

Readings:

Deaton, ch.2

2. Welfare, Poverty, and Distribution

- measures of welfare, poverty, and inequality (income, and non-income measures)
- implementing measurements with household data:
 - individuals vs. households
 - adult equivalence: theory and evidence
 - economies of scale
- decomposing inequality measures
- tracking changes over time
 - absolute vs. relative poverty: concepts and applications
 - uncertainty about welfare measures, prices, poverty lines
- implementing non-income measures of welfare and deprivation

Reading:

Deaton, ch. 3.1, 3.2, 4.3

Dreze, and Srinivasan: Widowhood and Poverty in Rural India

Dercon, Stefan: Poverty Orderings when welfare cannot be exactly compared

Short, Garner, Johnson, and Shea: Redefining Poverty Measurement in the US

Deaton and Paxson: Measuring Poverty among the Elderly

Klasen: Measuring Poverty and Deprivation in South Africa

Buhmann et al. 1988: Equivalence Scales, Well-Being, Inequality, and Poverty: Sensitivity Estimates across 10 countries using the Luxembourg income study.

Ray, Debraj. 1998. Development Economics, ch.6

Ravallion, Martin (1995): Poverty Comparisons

Slesnick: Gaining Ground: Poverty in the United States.

Woolard and Klasen. 2005. Income Mobility and Household Poverty Dynamics in South Africa

Klasen and Woltermann. 2004. The impact of demographic dynamics on economic development, poverty and inequality in Mozambique

Lelli, S. 2005. Using Functionings to Estimate Equivalence Scales. Review of Income and Wealth

Lanjouw,-Peter; Ravallion,-Martin:Poverty and Household Size *Economic-Journal*.

November 1995; 105(433): 1415-34

Elbers, Chris, Jean O. Lanjouw, and Peter Lanjouw (2003). Micro-Level Estimation of Poverty and Inequality. *Econometrica* 71(1): 355–364.

Grosse et al. (2006) Creating national poverty profiles with incomplete income and expenditure data: An application to Bolivia.

3. Intrahousehold Allocation of Resources

- theoretical approaches to intrahousehold resource allocation: bargaining and investment models
- the problems of household-based data
- ways to measure intrahousehold resource allocation using expenditure data
- examples of findings

Reading:

Deaton, ch. 4.2

Klasen: Marriage, Bargaining, and Intrahousehold Resource Allocation

Lundberg, Pollak, and Wales: Do Husbands and Wives Pool their Resources?

Thomas: Intrahousehold Resource Allocation: An inferential approach

Horney and McElroy: The Household Allocation Problem, *Research in Population Economics* 6: 15-38

Gong, van Soest, and Zhang: Sexual Bias and Household Consumption: A Semiparametric Analysis of Engel Curves in Rural China

Haddad, Hoddinott, and Alderman: Intrahousehold Resource Allocation in Developing Countries: Models, Methods, and Policy, ch. 9, 11, 14

Schultz (1990): Testing the Neoclassical Model of Family Labor Supply and Fertility *Journal-of-Human-Resources*. Fall 1990; 25(4): 599-634

4. Public and Private Safety Nets

- the endogeneity of households
- substitution between public and private safety nets
- incentive effects of public safety nets
- equity effects of public safety nets

Readings:

OECD Employment Outlook June 1998, ch.1

Deaton, ch 3.3

Klasen and Woolard: Surviving Unemployment without State Support

Rosenzweig, Mark and Kenneth Wolpin. 1993. "Intergenerational Support and the Life-Cycle Incomes of Young Men and their Parents." *Journal of Labor Economics* 11: 84-112.

----- 1994. "Parental and Public Transfers to Young Women and their Children." *American Economic Review* 84: 1195-1212.

McElroy, Marjorie. 1985. "The Joint Determination of Household Membership and Market Work: The case of Young Men." *Journal of Labor Economics* 3: 293-316.

Ermish, J. Parental Support for Human Capital Investment by Young Men.

Bentolila and Ichino: Unemployment and Consumption: Are Job Losses less painful near the Mediterranean? Mimeographed, CEMFI and CESifo.

Böheim, Ermish, and Jenkins: The Dynamics of Lone Mother's Incomes: Public and Private Income Sources Compared. Mimeographed, ISER.

5. Incidence Analysis and the Effects of Price and Tax Reform

- the impact of taxation
- the effects of price and tax reform
- who benefits from public spending
- targeting: theory and practise
- theoretical and practical measurement issues
- linking administrative and household data
- simulation versus measurement
- project evaluation

Reading:

Deaton, ch 3.3, 5

Van der Walle and Nead: Public Spending and the Poor: for conceptual issues, see ch.1,2, 5, for practical issues, see ch. 7, 9, 20, and other chapters.

Schultz, T.P., 2004: School subsidies for the poor: evaluating the Mexican Progresa poverty program, *Journal of Development Economics* 74(1), 199-250

Todd, P.E. and K.I. Wolpin, 2006: Assessing the Impact of a School Subsidy Program in Mexico: Using a Social Experiment to Validate a Dynamic Behavioral Model of Child Schooling and Fertility, *American Economic Review* **96(5)**, 1384

Castro-Leal: Public Education Spending and the Poor

Castro-Leal: Public Health Spending and the Poor

6. Determinants of Undernutrition

- the measurement of undernutrition
- macro and micro determinants of undernutrition
- the complexity of causal relations
- regional determinants
- debates about the income-calorie relationship
- graphical chain models and spatial analyses

Readings:

Deaton, ch. 4.1

Bouis, H. and L. Haddad. 1992. Are estimates of the calorie-income elasticities too high? A recalibration of the plausible range. *Journal of Development Economics* 39, 333-364.

Klasen, S. 2007. Poverty, undernutrition, and child mortality. Some inter-regional puzzles. *Journal of Economic Inequality*.

Caputo, Foraita, Klasen, and Pigeot 2001. Under nutrition in Benin: An Analysis based on Graphical Models, *Social Science and Medicine*

Kandala, NB, L. Fahrmeir, and S. Klasen 2006. Geo-Additive Models of Childhood Undernutrition in 3 Sub-Saharan African Countries.

Belitz, Hübner, Klasen, Lang. 2007. Determinants of sex differences in undernutrition in India.

7. Duration Models: Application to Unemployment

- Search Models and Unemployment Duration
- Supply and Demand Effects in Unemployment Duration
- Duration Dependence and Discrimination
- Unobserved heterogeneity
- The Role of Unemployment Benefits

Readings:

Atkinson and Micklethwait. 1991. Unemployment Compensation and Labor Market Transitions: A Critical Review, *Journal of Economic Literature* 29:1679-1727

Böheim, R. and M. Taylor. 2000. Unemployment Duration and Exist States in the UK. Mimeographed, ISER, Essex.

Wolff, J.: *Essays in Unemployment Dynamics*, ch. 3, 4

Steiner: Extended Benefit-Entitlement Periods and the Duration of Unemployment in West Germany. ZEW Discussion paper 97-14.

Meyer, B. 1990. Unemployment Insurance and Unemployment Spells. *Econometrica* 58: 757-782.

Launov, A. J. Wolff, and S. Klasen. 2004. "Unemployment Benefits and Unemployment Rates of Low-Skilled and Elder Workers in West Germany: A Search Equilibrium Approach"