

Economics of Inequality

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Aims: to introduce students to principles and practice in the analysis of the distribution of income. By the end of the course, students should be familiar with recent literature, and in a position to undertake their own empirical analysis.

Organisation: a 30-hour course broken down into 10 three-hour sessions (each with a break), including lectures and hands-on practical experience in the PC lab.

Course overview

Session	When	Who	What
	Monday 26 June		
1	AM	ABA	Introduction to the economics of inequality
2	PM	ABA	Measurement of inequality and poverty
	Tuesday 27 June		
3	AM	ABA	The importance of data
4	PM	SPJ	Income mobility and poverty persistence, and supervised PC lab session #1
	Wednesday 28 June		
5	AM	ABA	Towards explaining the distribution of income
	Thursday 29 June		
6	AM	SPJ	Statistical inference for inequality and poverty measures
7	PM	SPJ	Multivariate models of poverty dynamics
	Friday 30 June		
8	AM	ABA	The world distribution of income
9	PM	SPJ	Empirical models of the intergenerational transmission process
	Saturday 1 July		
10	AM	SPJ	Supervised PC lab session #2

Session 1: Introduction to the Economics of Inequality (ABA)

Introduction to economics of inequality. Reasons for study: intrinsic and instrumental. Policy salience (national governments, EU social inclusion process, Millennium Development Goals).

A first look at income distribution and poverty in OECD countries using LIS and Eurostat data.

Definitional issues: inequality of what among whom? Income, consumption and capabilities. Welfarist and non-welfarist approaches.

Reading: "Introduction" to *Handbook of Income Distribution* by A B Atkinson and F Bourguignon.

Session 2: Measurement of inequality and poverty (ABA)

Measurement of inequality. First-order dominance. Lorenz dominance and generalised Lorenz curves.

Summary measures of inequality: Gini etc. Real national income. Generalised entropy and decomposition.

Poverty measures, including Sen index, and dominance approach (TIP curves). Absolute and relative approaches.

Practical issues in the design of indicators: the EU Laeken indicators as a case study.

Reading: Chapter by F A Cowell in *Handbook of Income Distribution*.

Session 3: The importance of data (ABA)

Data quality issues in economics.

Sensitivity of results to poor data quality, illustrated by reference to cross-country panel studies of income inequality.

Different sources of data, illustrated by reference to the distribution of individual earnings.

Construction of new data, illustrated by reference to the distribution of top incomes.

Reading: Chapter by Z Griliches in *Handbook of Econometrics*, vol III.

Session 4: Income mobility and poverty persistence, and supervised PC lab session #1 (SPJ)

Long-term (from one generation to the next) and short-term (from one year to the next): reasons for study and policy salience: equity, equality of opportunity, and relationship to inequality of outcome;

Empirical measurement of mobility and poverty persistence: measures; longitudinal data sets; overview of current evidence about inter-generational and inter-year mobility and poverty persistence.

Reading:

Solon, G. (2002). 'Cross-country differences in intergenerational earnings mobility', *Journal of Economic Perspectives*, 16, 59–66.

Corak, M. (ed.) (2004). *Generational Income Mobility in North America and Europe*, CUP.

Fields, G.S. and Ok, E. (1999). 'The measurement of income mobility: an introduction to the literature'. In J. Silber (ed.) *Handbook on Income Inequality Measurement*, Kluwer Academic Publishers, Dordrecht and New York.

Jenkins, S.P. (2000). 'Modelling household income dynamics', *Journal of Population Economics*, 13, 529–567.

Jenkins, S.P. and Rigg, J.A. (2001). *The Dynamics of Poverty in Britain*, DWP Research Report No. 157. Corporate Document Services, Leeds. Chapters 1 and 2. <http://www.dwp.gov.uk/asd/asd5/rrep157.asp>

See Session 10 below about the PC lab sessions.

Session 5: Towards explaining the distribution of income (ABA)

Sources of income. From factor prices to the distribution of personal incomes. Impact of public policy.

Taking the long-run view: models of structural change, technological progress, and of international trade. Has there been a "great U-turn"?

Role of wealth.

Reading: A B Atkinson, "Bringing Income Distribution in from the Cold", *Economic Journal*, 1997.

Session 6. Statistical inference for inequality and poverty measures (SPJ)

Estimation of the measures discussed in ABA's Session 2 using sample survey data, taking account of sampling variability, and the complications introduced by complex survey design (probability weights, clustering and stratification). Bootstrap, jack-knife, and linearization methods.

Reading:

- Beach, C.M. and Davidson, R. (1983). 'Distribution-free statistical inference with Lorenz curves and income shares', *Review of Economic Studies* 50, 723–735.
- Berger, Y.G. and Skinner, C.J. (2003). Variance estimation of a low-income proportion', *Journal of the Royal Statistical Society Series C (Applied Statistics)*, 52, 457–468. Pre-print version available from <http://eprints.soton.ac.uk/7792/>
- Kovacevic, M.S. and Binder, D.A. (1997). 'Variance estimation for measures of income inequality and polarization. *Journal of Official Statistics*, 13, 41–58. <http://www.jos.nu/Articles/abstract.asp?article=13141>.
- Biewen, M. and Jenkins, S.P. (2006 forthcoming). 'Variance estimation for Generalized Entropy and Atkinson inequality indices: the complex survey data case'. *Oxford Bulletin of Economics and Statistics*. Earlier version available as ISER Working Paper 2003-11, <http://www.iser.essex.ac.uk/pubs/workpaps/pdf/2003-11.pdf>.

Session 7. Multivariate models of poverty dynamics (SPJ)

Review of different approaches: 'structural' versus 'reduced form' approaches. Variance components models, hazard regression models, Markovian models. Illustrations.

Reading:

- Jenkins, S.P. (2000). 'Modelling household income dynamics', *Journal of Population Economics*, 13, 529–567.
- Aassve, A., Burgess, S., Dickson, M. and Propper, C. (2005). 'Modelling poverty by not modelling poverty: an application of a simultaneous hazards approach to the UK', ISER Working Paper 2005-26, University of Essex, Colchester. <http://www.iser.essex.ac.uk/pubs/workpaps/pdf/2005-26.pdf>
- Biewen, M. (2005), 'The covariance structure of East and West German incomes and its implications for the persistence of poverty and inequality', *German Economic Review*, 6, 445–469. <http://www.blackwell-synergy.com/toc/geer/6/4>
- Cappellari, L. and Jenkins, S.P. (2004). 'Modelling low income transitions', *Journal of Applied Econometrics*, 19, 593–610.
- Jenkins, S.P. and Rigg, J.A. (2001). *The Dynamics of Poverty in Britain*, DWP Research Report No. 157. Corporate Document Services, Leeds. Chapter 4. <http://www.dwp.gov.uk/asd/asd5/rrep157.asp>
- Stevens, A.H. (1999). 'Climbing out of poverty, falling back in: measuring the persistence of poverty over multiple spells', *Journal of Human Resources*, 34: 557–88.

Session 8: The world distribution of income (ABA)

Contrast between absolute approach to world poverty and relative approach to world income inequality. Need for a re-consideration of inequality measurement on a world scale.

Taking the absolute approach seriously. Absolute and intermediate inequality indices.

Social marginal valuation of income, and a new form of inequality measure. Implications for world inequality and for distributionally adjusted global measures such as those for the costs of global warming.

Reading: F Bourguignon and C Morrisson, “Inequality Among World Citizens: 1820-1992”, *American Economic Review*, 2002.

Session 9. Empirical modelling of the intergenerational transmission process (SPJ)

From theoretical models to empirical implementation. Identifying causal effects of family background variables: levels models, sibling difference models, instrumental variables and ‘differences in differences’.

Reading:

Goldberger, A.S. (1989) ‘Economic and mechanical models of intergenerational transmission’, *American Economic Review*, 79, 504–513.

Becker, G.S. ‘On the economics of the family: reply to a skeptic’, *American Economic Review*, 79, 514–518.

Haveman, R. and Wolfe, B. (1995). “The determinants of children’s attainments: a review of methods and findings”, *Journal of Economic Literature* 33, 1829–1878.

Ermisch, J.E., Francesconi, M. and Pevalin, D.J (2004). ‘Parental partnership and joblessness in childhood and their influence on young people’s outcomes’, *Journal of the Royal Statistical Society Series A*, 167, 69–101.

Francesconi, M., Jenkins, S.P. and Siedler, T. ‘Childhood family structure and schooling outcomes: evidence for Germany’, ISER Working Paper 2005-22, University of Essex, Colchester. <http://www.iser.essex.ac.uk/pubs/workpaps/pdf/2005-22.pdf>

Session 10. Supervised PC lab session #2 (SPJ)

PC-based session using the software Stata, giving hands-on experience with application of topics addressed in ABA’s Session 2 (‘Measurement of inequality and poverty’) and Session 8 (‘World distribution of income’), and SPJ’s Session 4 (‘Income mobility ...’) and Session 6 (‘Statistical inference ...’). SPJ’s suite of Stata programs for income distribution analysis will be supplied, together with sample data, and a set of ‘exercises’. Students are welcome to bring along their own data as well.

Stata (<http://www.stata.com>) is one of the most widely-used statistical software packages among economists. For a short introduction to Stata, especially for those who have not used it before, see <http://www.iser.essex.ac.uk/teaching/degree/stephenj/ec968/pdfs/ec968st1.pdf>.