

**University of Oxford
Department of International Development
Queen Elizabeth House**

**M Phil in Development Studies
2015-16**

**First Year Course in
Research Methods**

Quantitative Methods

University of Oxford
Department of International Development

RESEARCH METHODS
2015-2016

Course Convener (Quant Methods): Xiaolan Fu

Lecturers: Xiaolan Fu, Douglas Gollin, Andreas Georgiadis

Class Teachers: Serena Masino, Malu Gatto

Class Hours: Tuesdays 11:00-13:00 (Group A) and 13:00-15:00 (Group B) (QEH, Seminar Room 1) (*week 2 finishes half an hour earlier)

Lecture Hours: Thursdays 14:00-15:30 (3 Mansfield Road, Seminar Room 1)

Introduction: This course aims (1) to provide students with a basic knowledge of social science research methodologies, (2) to inculcate the critical capacity to conduct qualitative and quantitative research and analysis, and (3) to reflect on the ethics and politics of social science research in practice.

The Research Methods Course is as important to the MPhil degree as the Core Course in Development Studies. The main objectives of this course are to raise the epistemological and ethical questions underpinning social science research in the context of international development, to familiarize students with the basic statistical methods used in quantitative social research, and to achieve the challenging project of demonstrating how qualitative and quantitative research methods can be integrated and made complementary. We are committed to facilitating our graduate students' training in inter- and trans-disciplinary research.

During the first term (Michaelmas Term or MT, covered in detail here), students will be introduced to research design and epistemology; the use of archives and texts; ethnography and participant observation; oral history and interviewing; and the particular research challenges students of development studies tend to face in combining qualitative and quantitative methods, designing and using surveys, and working with and studying agents of development such as NGOs. Each session will address theoretical issues as well as practical questions regarding the ways in which these methods might be effectively used by MPhil students in their thesis research. Week 8 of MT will be devoted to considerations of research design and methodology as applied to MPhil theses in anticipation of the Hilary Term thesis workshops.

The second term (Hilary Term or HT, details to follow) will be dedicated to the formal teaching of basic statistical methods used in quantitative social research, with a particular focus on development. The emphasis will be on the intuitive understanding of concepts and procedures (the mathematical derivation of the techniques will be skipped), but the logic and reason behind each formula will be discussed. During this term, the students will be introduced to basic descriptive statistics, hypothesis testing, comparison of groups, simple and multiple regressions, and basic skills in using STATA for quantitative analysis.

During the third term (Trinity Term or TT, details to follow) the students will have workshops on ethics, safety and fieldwork and on library resources, and revision sessions on qualitative and quantitative methods.

Students who have no prior experience will be able to develop skills in research methods and those with some prior knowledge will have the opportunity to enhance their skills. There are three optional routes for students with prior knowledge in quantitative methods: 1) stay with the MPhil RM course and spend more time on other courses; 2) stay with the MPhil RM course and do a quantitative methods option in Year 2; 3) stay with the MPhil RM course and do a quantitative methods option in Year 1. Note that all students must take the MPhil RM exam no matter which route he or she chooses.

We do not promote any particular theoretical approach or research method, but attempt to help students reach an understanding of how different research methods can best be used to reach their objectives in different contexts, depending on the underlying purpose of the research endeavour. We focus on the conception, design and implementation of studies that seek to understand theoretical and practical issues in development.

Course format: The form of the weekly sessions will vary to some extent, but each will begin with a class on Tuesdays that explains a particular methodology or approach, followed by a lecture on Thursdays that discusses the applications of quantitative methods in development studies through demonstration of real research applications and in-depth, interactive discussions of the overall research design, methods choice, and issues in data analysis. Students are expected to come prepared to discuss the set topics and readings. They will be encouraged to use the qualitative and/or quantitative methods they have read about, and to reflect on their own research experience as they develop their MPhil research.

Organisation of the lectures and classes are as follows:

For qualitative methods in MT: Two hours per week of lecture and practical exercises or discussion;

For quantitative methods in HT: One and half hours of lecture and two hours per week of classes. The class will be split into two groups based on students prior training in statistics.

For students who have no prior training in statistics or econometrics, there will be 2 voluntary sessions introducing the use of databases, the application of STATA for basic analysis, and the basic probability concepts in Michaelmas Term.

To strengthen students' skills in using computer software, the classes in Hilary Term will include two computer sessions on STATA.

Course assessment: The course is assessed by means of a written examination in Trinity Term and a research design essay.

The written examination, which takes place at the end of the year and requires students to answer a total of three questions (at least one from each section), covers qualitative and quantitative methods. A list of formulae is provided for the quantitative methods section, so that students do not have to memorise them. The list has more formulae than are used in the examination, so that students are required to identify the ones they need. The mark for the examination constitutes 50 per cent of the total mark for Research Methods.

In Trinity Term students will write a supervised, assessed research design essay due in Week 5. This essay forms 50 per cent of the total mark for Research Methods.

Coursework for Quantitative Research Methods consists of two sets of homework and a group project. Answers to the first and second set of homework must be submitted to the class convener by Fridays of Week 4 and 7, respectively. The students are encouraged to work out part of the homework every week and make the whole process accumulative and progressive. The coursework will be graded although the marks are 'informal' and are meant to help in gauging progress and preparing for the exam and the thesis. All course work is compulsory. The quantitative methods group project will be presented in Week 8 of HT.

Summary of lecture schedule (Quant Methods)

MICHAELMAS TERM,

Week 5: Voluntary Computer Session on data management (4-6pm, IT Room, Manor Road)

Week 6: Voluntary Session on basics of statistics: probability and distribution (2-4pm, SR2, QEH)

HILARY TERM

Classes in HT will be on Tuesdays. The class will be divided into two groups. One for students without prior stats training and the other group for students with prior stats training. You will be informed of the exact time in due course.

STATA sessions will take place during class time in weeks 1 and 6 at QEH.

Students shall bring their own laptop which STATA software installed.

Lecture on Thursday in Week 8 will be extended to 13:30-16pm.

TRINITY TERM, Tuesdays, 11-1, Seminar Room 1, except week 4

Week 7: Exam preparation (quantitative research methods)

Hilary Term

Week 1. Quantitative methods for development studies: Introduction

Tuesday: Basic descriptive statistics, introduction to STATA (SM)

Thursday: Basic concepts and research design (XFu)

Reading: Primary: (AF 1-2, Healey 1),

Week 2. Quantitative methods for development studies: Basic techniques

Tuesday: Confidence intervals, Hypothesis test (SM)

Thursday: Data collection and survey sampling (XFu)

Reading: (AF 5-6, Healey 6-11) and Casley, D.J. and D.A. Lury (1987)

Week 3. Comparisons between two groups

Tuesday: t-test, z-test (SM)

Thursday: Application: Spatial patterns of development (Doug Gollin)

Reading: (AF 7, 8, , Healey 8-10)

Week 4. Comparisons between several groups: ANOVA

Tuesday: ANOVA (SM)

Thursday: Application: ANOVA in World Development papers (XFu)

Reading: (AF 12, Healey 11)

- Jiang, S., Lu, M. and Sato, H. (2011). And Murphy, J. T., 2002.

Week 5. Simple regression

Tuesday: Simple regression and correlation (MG)

Thursday: Application: Determinants of children's human capital (Andreas Georgiadis)

Reading: (AF 9 &11, Healey 15-16)

- Andreas G. and P. Hermida (2015)

Week 6. Multiple regressions

Tuesday: Multiple regression – STATA session (MG)

Thursday: Application: Ownership and productive efficiency of rural enterprises (XFu)

Reading: (AF11, Gujarati 9, Healey 17-18)

- Fu, X. and VN Balasubramanyam, (2003)

Week 7. Multiple regressions – dummy variables and interaction terms

Tuesday: Dummy variables and interaction terms (MG)

Thursday: Application: Openness, migration and regional inequalities (XFu)

Reading: (AF11, Gujarati 9, Healey 17-18)

- Fu, X (2004) and Fu, X. Muchie, M. and Egbetokun, A. (2015)

Week 8. Model building, interpretation and the role of theory and practices*

Tuesday: Q&A on homework (MG)

Thursday: Group project presentations and comments (XFu)

Reading: (AF 14, Healey 17-18).

Reference:

-The main textbooks for the course will be:

Healey: Healey, Joseph F. (1993), *Statistics: A Tool for Social Research*, 3rd edition, Wadsworth

AF: Agresti, Alan and Barbara Finlay (1997), *Statistical Methods for the Social Sciences*, 3rd edition, Prentice Hall

-Papers used for application showcase (Essential reading)

Week 4

- Jiang, S., Lu, M. and Sato, H. (2011). 'Identity, Inequality, and Happiness: Evidence from Urban China', *World Development*, doi:[10.1016/j.worlddev.2011.11.002](https://doi.org/10.1016/j.worlddev.2011.11.002)
- Murphy, J. T., 2002. 'Networks, Trust, and Innovation in Tanzania's Manufacturing Sector', *World Development* Vol. 30, No. 4, pp. 591–619.

Week5

- Andreas G. and P. Hermida (2015) 'Family Socio-economic Status, Mother's Psychosocial Skills, and Children's Human Capital: Evidence from Four Low and Middle-income Countries', Young Lives working paper.

Week6

- Fu, X. and VN Balasubramanyam, (2003) 'Township and Village Enterprises in China', *Journal of Development Studies*, 39(4): 27-46

Week7

- Fu, X (2004) 'Limited Linkages from Growth Engines and Regional Disparities in China', *Journal of Comparative Economics*, 32(1): 148-64

- Other useful textbooks in statistics:

Basic

- Kranzler, Gerald and Morusund, Janet (1999), *Statistics for the Terrified*, Prentice Hall
- Larry Gonick and Woollcott Smith (1993), *The Cartoon Guide to Statistics*, HarperCollins.
- Spiegel, Murray and Larry J. Stephens (1999), *Theory and Problems of Statistics*, (Schaum's Outline Series), 3rd edition, McGraw-Hill

Intermediate

- Wonnacott, Thomas H. and Ronald J. Wonnacott (1990), *Introductory Statistics*, 5th edition, Chichester: Wiley

Econometrics

- Kennedy, Peter (1998), *A Guide to Econometrics - 4th Edition*, The MIT Press.
- Mukherjee, Chandan, Howard White and Marc Wuyts (1998), *Econometrics and Data Analysis for Developing Countries*, London: Routledge
- Gujarati, Damodar N. (2003), *Basic Econometrics*, 4th edition, London: McGraw-Hill

Data collection in developing countries

- Casley, D.J. and D.A. Lury (1987), *Data Collection in Developing Countries*, Oxford: Clarendon Press

Presentation of statistical information:

- Chapman, Myra and Cathy Wykes (1996), *Plain Figures*, London: HMSO.

Journal paper of empirical studies on development

- World Development
- Journal of Development Studies
- Journal of Development Economics
- Journal of International Development
- Oxford Development Studies
- World Bank Economic Review
- Economics Development and Culture Change

Other Papers to read before the start of Hilary term (select any two)

- David Pottebaum and Ravi Kanbur, 2004. "Civil War, public goods and the social wealth of nations", *Oxford Development Studies*, 32.4, 459-484.
- David A. Clark and Mozaffir Qizilbash, 2008. "Core Poverty, Vagueness and Adaptation: a New Methodology and some results for South Africa", *Journal of Development Studies*, 44.4, 519-544.
- Sanjaya Lall, 2005. 'Is African Industry Competing?', QEH working paper WPS122, University of Oxford.
- V. N. Balasubramanyam, M. Salisu and David Sapsford, 1996. 'Foreign direct investment and growth in EP and IS countries', *Economic Journal*, 106, 92-105.
- Frankel, Jeffrey A.; Romer, David, 1999. [Does Trade Cause Growth?](#) *American Economic Review*, Vol. 89 Issue 3, p379-399,
- Frankel, Jeffrey A.; Rose, Andrew K., 2005. Is Trade Good or Bad for the Environment? Sorting out the Causality, *Review of Economics & Statistics*, Vol. 87 Issue 1, p85-91,
- John M. Liuz, 2006. 'The wealth of some of the poverty of Sub Saharan Africa', *International journal of social economics*, vol. 33, no.8, 625-648.
- Melinda Moore, Philip Gould, Barbara S. Keary, 2003. 'Global unbanization and impact on health', *International Journal of hygiene and environmental health*, 206, 269-278.
- Michael Mousseau; Yuhang Shi, 1999 'A Test for Reverse Causality in the Democratic Peace Relationship'. *Journal of Peace Research*, Vol. 36, No. 6., pp. 639-663.
- World Bank, various years. World Development Perspective.