Introduction to the Analysis of Cross-Sectional and Longitudinal Surveys

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1 General Information

1.1 Background

Analysis on individual outcomes, like education, unemployment, evolution of income and health, are frequently conducted using different types of household surveys, which are a valuable source both for informing policy makers and for conducting academic research. In some countries, surveys have even become a dominant form of data collection, filling the gap for costly census information or civil registration systems that are technically difficult to conduct on a regular basis. Representative surveys are designed using statistical sampling methods, meaning that a subset of a population is selected to accurately reflect the characteristics of a larger group. The aim of this seminar is to introduce the student to different types of representative household surveys and some of the most common uses of survey data for academic research and policy reports.

In this 2 SWS Bachelor Seminar, the student plays an active role by constructing and interpreting selected economic or social indicators using survey data and writing a short essay with the results. Students gain a first sense of micro economic data analysis, survey data sources for academic research, report writing and data management issues associated to survey data. The software to be used in class is STATA.

1.2 Specific course goals

At the end of the course students should have a broad overview on survey design, sampling, types of questionnaires (household and individual for example), survey modes, problems of non-response and weighting. Students should be able to create basic descriptive statistics and graphs using household survey data and interpret the results. They will also have gained a basic knowledge on how to measure selected poverty, health, education, labor market and migration indicators using household surveys.

1.3 Prerequisites

Introduction to Econometrics

1.4 Credit points

6 Credit points

2. Course overview

The course will cover examples of the following surveys:

1. Demographic and Health Surveys
2. National Household Surveys
   a. Continuous Household Survey
   b. Multiple Indicator Cluster Survey (MICS)
   c. Labor Force Surveys
   d. Living Standard Measurement Surveys
   e. Household Income and Expenditure Surveys (LSMS)

Longitudinal Studies – Panel Studies for single countries
3. National Longitudinal Surveys (USA)
4. German Socio-Economic Panel

Cross Country Longitudinal Studies

5. The Cross-National Equivalent File (CNEF)
6. The European Union Statistics on Income and Living Conditions (EU-SILC)

The students should select among the following topic, after selecting a dataset:

1. Poverty and inequality measurement using income or expenditure aggregates (Foster Greer and Thorbek measures, Gini Coefficient)
2. Education: literacy, educational attainment level (International Standard Classification of Education), indicators on current school grade, quality of education, indicators for the Sustainable Development Goals 4)
3. Labor Outcomes (Employment and Unemployment rates, Labor Force Participation, part-time and full-time work, underemployment, hours worked)
4. Health: Fertility, early childhood development, maternal health, nutrition
5. Migration: migration background, return migration, migrants remittances, perceived reasons for migration, legal status of migrants

2.1 Description of the teaching and learning method

The students are required to select a survey (specific year and country) and a topic out of the list provided in 2, on which they will write a short 10-15 pages essay in English. The essay should comprise a short description of the selected survey, a description of the indicators to be calculated, and the results of those indicators with a brief interpretation. The instructor will provide selected datasets (open source) or point to specific data sources.

In the mid-term meeting, the instructor will provide an introduction to different types of household surveys, analysis examples by topic, and STATA examples on how to use weights or create tables of descriptive statistics. Students will submit the outline of their term papers, and discuss the indicators to be calculated with the instructor in individual meetings. In the main seminar each student will make a 15 minutes presentation of the essay.

The course will be accompanied by an introductory STATA course available in Stud IP created by the chair of Development Economics (details will be provided in the introductory meeting).

2.2 Scheduling

A preliminary meeting will take place on October 23 to distribute topics and explain the course contents and methodology.

On the 18th of December, students will present the outline of their paper in the Mid-Term meeting, get feedback and discuss also the outlines of other students.

The instructor will provide further individual assessment (via Zoom) by demand on issues like learning STATA, calculating indicators or solving shortcomings on data management.

The block seminar takes place on January 26th and 27th.

Specific schedule and deadlines

	Date	Hour	Place
Start Registration in Flex Now	15.10.2023	0:00	
Final date for registration in Flex Now	30.11.2023	24:00	
Preliminary Meeting and distribution of Topics	30.10.2023	17:15- 18:45	t.b.d
Mid-Term Meeting 1	18.11.2023 (Saturday)	8:15-16:45	
Outline Submission	3.12.2023	24:00	
Term Paper Submission	22.01.2023	18:00	
Presentation Submission	24.01.2023	18:00	
Seminar Day 1	26.01.2023 (Friday)	8:00-17:00	t.b.d
Seminar Day 2	27.01.2023 (Saturday)	9:00-17:00	t.b.d

2.3 Examination and grading of the module

75% Term Paper

25% Presentation and Class Participation

Note: participation in both days of the seminar is mandatory.

2.4. Research paper requirements

The student is expected to select one household survey out of those suggested in the list below and define one topic of analysis to be conducted with that data. The term paper has to be written including the following sections: 1) Introduction (topic and country data selected telling on the relevance of the topic and the question to be answered with the descriptive statistics 2)

Main concepts of the selected indicators 3) Data Description, Survey design and coverage 4) Results 5) Discussion. The term paper should not be longer than 15 pages including graphs and tables. The student has to submit a PDF version of the paper and the STATA code used for calculations.

2.5. Presentation requirements

Presentations should not take longer than 15 minutes. Presence in both days of the block seminar is mandatory. An active participation during the seminar, by raising questions to presentation of other students is expected.

2.4 Course materials

- Stata Learning Course: As accompanying material for the course, the students are advised to conduct the STATA course offered by the Development Economics Chair of Prof. Andreas Fuchs and available in Stud-Ip.
  For this course students need to spend about about 8 hour of self-learning.
- Household survey datasets (open access)
- Mandatory readings for all students (See Literature)
- Specific suggested readings for each topic (See List of Topics)

Literature

Mandatory Reading

Deaton, A. (1997). *The analysis of household surveys : a microeconometric approach to development policy.* Baltimore, Md.: John Hopkins University Press. (Chapter 1)

Heeringa, S. W. (2017). *Applied Survey Data Analysis 2nd ed.* Boca Raton: Chapman Hall / CRC Press.(Chapter 1 and Chapter 2)

Suggested Literature

Andreß, H.-J., Golsch, K., & Schmidt, A. W. (2013). *Applied Panel Data Analyisis for Economic and Social Surveys.* Springer-Verlag Berlin Heidelbert.

Armour, P., Burkhauser, R. V., & Larrimore, J. (2013). Deconstructing Income and Income Inequality Measures: A Crosswalk from Market Income to Comprehensive Income . American Economic Review, 103, 173-77.

Bound, J., Brown, C., & Mathiowetz, N. (2001). Measurement Error in Survey Data. In Handbook of econometrics (Vol. 5, pp. 3705-3843). Elsevier.

Cowell, F. A., & Flachaire, E. (2007). Income Distribution and Inequality Measurement: The Problem of Extreme Values. Journal of Econometrics, 141, 1044-1072.

Grosh, Margaret E., and Paul Glewwe. 1998. "Data Watch: The World Bank's Living Standards Measurement Study Household Surveys." Journal of Economic Perspectives, 12 (1): 187-196.

Rao, P. (2006) Poverty Measurement Using the Expenditure Approach. Working Paper_August 2006_School of Economics. University of Queensland. Brisbane. Australia.

Grosh, Margaret; Glewwe, Paul. 2000. Designing Household Survey Questionnaires for Developing Countries : Lessons from 15 Years of the Living Standards Measurement Study, Volume 3. Washington, DC: World Bank. http://hdl.handle.net/10986/15195