Introductory Methodology

Interdisciplinary Social Science PhD Programme

Lecture and seminar

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No data used by any discipline may be analyzed without reference to the method of data collection, which determines their appropriate frame of interpretation. For example, a figure for unemployment rate is difficult or even impossible to interpret without telling whether this is a process produced figure, based on the number of those applying for unemployment benefits, or comes from a survey and is an estimate based on t number of those who say they are unemployed. The mode of data collection, therefore, is important even for users of the most basic statistical information and this is even more so for those not only using, but also analyzing data. This course discusses some of the fundamental issues of data collection and analysis, so that students gain an impression of the question that may be asked and may be answered, based on data. We shall not discuss any of the methods of data analysis in detail, rather we intend to facilitate a later study of these methods and we also will try to put the methods already known by students in the right perspective. The doctoral level of the course manifests itself, on the one hand, in the generality of discussion and, on the other hand, in the contribution expected from the students.

The class meets six times during the term and, accordingly, six topics will be discussed. The first 90 minutes will be lectures and during the second 90 minutes contributions to the topic are requested by the students, concerning their own related experience and questions to be discussed. The grade will be based on a take home assignment, which discusses one of the topics or a problem related to that.

Topics to be discussed:

Methods of data collection and their effects on statistical inference

Causal analysis

Effects, interactions, joint effects, independence, conditional independence

Levels of measurement and their effects on the analyses that are possible (linear model, categorical data)

Review of multivariate statistical methods from the perspective of the research question (and not from that of the levels of measurement)

Handling of missing data and data fusion