UNIVERSITAT POMPEU FABRA

RECSM
Research and Expertise Centre for Survey Methodology

Two new courses organized by RECSM

Both courses are directed to experts coming from survey research commercial firms, researchers and students of political science, sociology, psychology, medical sciences and economics. No prior knowledge of specific software is assumed.

Registration procedure:

Send an email to **recsm@upf.edu**, indicating your interest in registering for the course(s) and including your name, institution, address, telephone and email address. Please specify if you would like to register to both courses or only to one of them. As soon as this email is received, we will send you information on how to proceed with the payment. Registration will only be considered complete when payment for the course has been received by bank transfer. A maximum of 25 people can participate in each course. Participants will be admitted on a first-come first-serve basis: the first 25 people who sign up and pay the registration fee will be accepted.

Deadline for registration: December 3, 2013.

Costs:

Participants from commercial organizations:
€ 500 (both courses); € 400 (only Course 1); €100 (only Course 2).

Participants working at Universities (Researchers, Professors):
€ 250 (both courses); € 200 (only Course 1); € 50 (only Course 2).

Students (from any University):
€ 80 (both courses); € 50 (only Course 1); € 30 (only Course 2).

For more information on the courses please contact us at recsm@upf.edu.

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Course 1 – "My First Bayes: Why and How to Run Your First Bayesian Model using MPlus"
Instructor: Prof. Rens van de Schoot (Utrecht University, The Netherlands).
Date: December 10-11, 2013, from 09h30-13h00 and 14h00-17h30.
Location: Universitat Pompeu Fabra, Campus de la Ciutadella. Barcelona, Spain.

Description of the course:

Bayesian statistics are becoming more and more popular among applied researchers to answer their research questions. This is especially due to the availability of Bayesian estimation methods in software like Mplus where it is very easy to switch to Bayesian statistics. The purpose of this two-day workshop is to explain why and how to use Bayesian statistics without going into the mathematical details. During this two-day workshop you will be gently introduced into Bayesian statistics and its application to the estimation of Structural Equation Models (SEM).

If you ever wondered why:
- A p-value can be used to falsify a null-hypothesis but not to validate it?
- You are testing the null hypothesis even when it is never among your hypotheses of interest?
- It is sometimes difficult to interpret the results of classical hypothesis testing?

You will be happy to learn about Bayesian model selection which provides an answer to each of these questions.

If you ever encountered one of the following issues:
- A data set too small for your complex model?
- Non-normally distributed variables?
- Negative variances or correlations larger than one?

You will be happy to learn about Bayesian estimation because it explicitly addresses each of these issues.

If you ever wanted to compute:
- The probability that your hypothesis is correct after observing the data (which is not what the p-value does).
- A 95% interval reflecting your knowledge about a parameter of interest (which is not what the confidence interval does)
- The degree of support for each of the models in your model selection competition.

This workshop will teach you how these computations can be done and how the results should be interpreted.

Course outline:

On the first day we will discuss the conceptual differences between default statistics and Bayesian statistics, the role of priors in a Bayesian model and convergence issues. We will introduce you to the Mplus language (no prior knowledge of Mplus is assumed, but if you are not familiar with this software we will ask you to prepare a homework exercise) and in the afternoon you will run your first Bayesian model.

On the second day we will apply Bayesian statistics to models that are difficult or impossible to estimate using maximum likelihood and we present some results of simulation studies. We will discuss the performance of Bayesian estimation in small samples, how Bayesian estimation can be applied for approximate measurement invariance, how Bayesian estimation can solve the issue of obtaining inadmissible parameters, and we discuss Bayesian updating. In the afternoon we spend some time analyzing data using Mplus.

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Course 2 – "A brief introduction to measurement error and the Survey Quality Prediction 2.0 program"
Instructor: Dr. Melanie Revilla (Research and Expertise Centre for Survey Methodology, Universitat Pompeu Fabra)
Date: December 12, 2013, from 09h30-13h00.
Location: Universitat Pompeu Fabra, Campus de la Ciutadella. Barcelona, Spain.

Description of the course:

In this course the problem of measurement errors in survey research will be discussed. Measurement errors can have large consequences on the results of the research if they are not taken into account. In order to estimate them, two approaches can be used. The first is the estimation of the reliability and validity of questions using MTMM experiments. The second is the prediction of the reliability and validity of questions using the program SQP 2.0, which has been developed on the basis of the evaluation of 4000 questions included in MTMM experiments. The SQP 2.0 program can be used also for improvement of questions before the data collection starts and for the correction for measurement errors in the analysis of the relationships between variables.

Course outline:

- Introduction: importance of measurement errors
- Definitions of reliability, validity and quality in terms of random and systematic errors
- How to estimate the size of the errors: The MTMM approach
- How to estimate the size of the errors: an alternative, the SQP 2.0 program
- How to use the information from SQP to correct the results from measurement errors

Participants to the course "A brief introduction to measurement error and the Survey Quality Predictor 2.0 program" can bring their laptop to follow the exercises using the program SQP 2.0.

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