Event-History Analysis

Location: CIQSS, 3535 Queen-Mary, Suite 420, Montréal
Dates: June 8-12, 2009

Financial support for this Data Training School is provided by the Social Sciences and Humanities Research Council of Canada, the Fonds québécois de recherche sur la société et la culture and the universities affiliated to QICSS[1].

This course introduces to the fundamentals of event history, or survival analysis. Event history analysis models the timing events, such as death, marriage or entry into a cohabiting union, getting a job, losing a job, entering school, leaving school. In fact, these events can be any discrete change in state. This type of analysis focuses on how long it takes an event to occur and how different covariates are associated with the risk of the event occurring. We will cover basic concepts necessary to understand and set up an event history analysis along with non-parametric, parametric and semi-parametric models of the risk of event occurrence. We will also look into model choice and diagnostics and dealing with unobserved heterogeneity.

Trainer
This training session will be under the responsibility of **John Sandberg**, assistant professor, Department of Sociology, McGill University.

General course information
The sessions are in English from **9 am to 5 pm**. Lectures will be held in the mornings, followed by a practical hands-on laboratory session in the afternoon to apply and practice the material for each day using data from the Youth in Transition Survey (YITS) provided by Statistics Canada and available in the RDC. Workshops are given using Stata.

Schedule
Day 1 Monday, June 8th, 2009
Basic Concepts of Survival Analysis: Event, Timing, Spell, Censoring and Truncation
Nonparametric Models of Event Timing: Kaplan Meir and Life-Table Estimates

Day 2 Tuesday, June 9th, 2009
Parametric and discrete time models

Day 3 Wednesday, June 10th, 2004
Semi-parametric models: piecewise exponential and Cox proportional hazard models

Day 4 Thursday, June 16th, 2004
Time Varying Covariates Residual Analysis

Day 5 Friday, June 17nd, 2004
Model selection, frailty models and recap

[1] Université de Montréal, INRS-UCS, McGill University, Concordia University, Université Laval, Université du Québec à Montréal, Université de Sherbrooke.

Readings
Recommended to all participants

Cleves, Mario, William Gould, Roberto Gutierrez, and Yulia Marchenko. 2008. *An Introduction to Survival Analysis Using Stata, Second Edition*. 2nd ed. Stata Press.

Bibliography
Introductions to survival analysis in the social sciences

Allison, Paul D. (1984). *Event history analysis : Regression for longitudinal event data.* Beverly Hills CA : Sage. (Quantitative applications in the social sciences).

Allison, Paul D. (1995). *Survival analysis using the SAS system. A practical guide*. Cary NC : SAS Institute.

Blossfeld, Hans-Peter and Götz Rohwer (2002). *Techniques of event history modeling : New approaches to causal analysis, second edition*. Mahwah NJ : Lawrence Erlbaum Associates. [TDA]

Blossfeld, Hans-Peter, Alfred Hamerle et Karl Ulrich Mayer (1989). *Event history analysis : Statistical theory and application in the social sciences*. Hillsdale NJ : Lawrence Erlbaum Associates.

Petersen, Trond (1991). "The statistical analysis of event histories", *Sociological Methods and Research*, 19(3):270-323.

Palloni, Alberto and Aage B. Sørensen (1990). "Methods for the analysis of event history data : A didactic overview" in Paul B. Baltes, David L. Featherman and Richard M. Lerner (eds.), *Life-span development and behavior, volume 10*, pp. 291-323. Hillsdale NJ: Lawrence Erlbaum Associates.

Yamaguchi, Kazuo (1991). *Event history analysis*. Newbury Park CA : Sage Publications.

Eligibility
The course is open to graduate students and postdoctoral fellows as well as to professors and practising researchers. Participants should have some working knowledge of regression models or lifetables prior to the course and a practical knowledge of a statistical package such as SAS, STATA or SPSS.

A maximum off 15 participants will be selected on the basis of the relevance of the course to their curriculum, research, or teaching.

Information
The online registration period will run from **March 2 to 27, 2009**. Selection results will be announced during the week of **March 30, 2009**.

ATTENTION!
Please note that this course uses Statistics Canada confidential data. To have access, selected participants will need to get security clearance. The QICSS will guide participants through these procedures which will need to be initiated during the week of March 9.

For more information

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