Introduction to Event History Analysis

Aya Kachi, Ph.D.

Center for Comparative and International Studies (CIS), ETH Zurich

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This two-day course offers an introduction to event history analysis. Event history analysis—some people call it "duration analysis" or "survival analysis"—is a class of statistical methods that is becoming increasingly popular in the social sciences. In many situations in the social sciences, we are interested in analyzing the occurrence and timing of events. Some dictatorships are terminated more quickly than others. Some government coalitions or international agreements collapse sooner than others. Similarly some treaty negotiations and conflicts last longer than others. Some countries adopt new regulations much before other countries. In these political processes, we are often interested in identifying whether and to what extent various political economic factors determine the timing of events. The simplest way to analyze such a relationship is to look at correlations between the duration of a certain political state (e.g. a regime being authoritarian) and a number of structural factors that are suspected to determine the duration (e.g. the level of economic development). Event history analysis takes "timing" a little more seriously. In addition to assessing the effects of various structural variables on the length of certain political states, this methodology allows us to model a hypothesis that the probability of the event's occurrence increases or decreases as that particular state survives longer. For example, one might suspect that a cease-fire treaty is more and more likely to fail as time goes by after the treaty is signed. This dynamic effect of the "history" leading up to the occurrence of an event is at least as important as the effects of other structural factors contributing to the event's occurrence. This is where event history analysis becomes useful.

This course takes an intuitive approach to the method with a great emphasis on practical applications in political science. The course will cover formal probability and econometric theories only to a limited extent. As a primary computing tool, this course will use Stata. The course will involve both lecture and computing exercises with sample data sets.

If you are interested in reading a little more about the methodology ahead of time, the introduction chapter of the following two books might be suitable.

Janet M. Box-Steffensmeier and Bradford S. Jones. 2004. Event History Modeling: A Guide for Social Scientists. Cambridge University Press

Mario Cleves, William Gould, Roberto Gutierrez, and Yulia Marchenko. 2010. An Introduction to Survival Analysis Using Stata. Stata Press.