Title

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st — Survival-time data

Description Also see

Description

The term *st* refers to survival-time data and the commands—most of which begin with the letters st—for analyzing these data. If you have data on individual subjects with observations recording that a particular subject came under observation at time t_0 and that later, at t_1, a failure was observed, you have what we call uncensored survival-time data. If you have data on individual subjects with observations recording that a particular subject came under observation at time t_0 and that later, at t_1, a censoring was observed, you have right-censored survival-time data. If you have data on individual subjects with observations recording that a particular subject was observed at time t_0, but a failure already occurred by that time, you have left-censored survival-time data. If you have data on individual subjects with observations recording that a particular subject failed sometime between times t_l and t_u, you have interval-censored survival-time data. And, of course, you may have data that contain observations of all the above types.

If you have subject-specific data, with observations recording not a span of time, but measurements taken on the subject at that point in time, you have what we call a snapshot dataset; see [ST] **snapspan**.

If you have data on populations, with observations recording the number of units under test at time t (subjects alive) and the number of subjects that failed or were lost because of censoring, you have what we call count-time data; see [ST] **ct**.

st commands	Description
stset	Declare data to be survival-time data
stdescribe	Describe survival-time data
stsum	Summarize survival-time data
stvary	Report variables that vary over time
stfill	Fill in by carrying forward values of covariates
stgen	Generate variables reflecting entire histories
stsplit	Split time-span records
stjoin	Join time-span records
stbase	Form baseline dataset
sts	Generate, graph, list, and test the survivor and related functions
stir	Report incidence-rate comparison
stci	Confidence intervals for means and percentiles of survival time
strate	Tabulate failure rate
stptime	Calculate person-time, incidence rates, and SMR
stmh	Calculate rate ratios with the Mantel–Haenszel method
stmc	Calculate rate ratios with the Mantel–Cox method

stcox	Fit Cox proportional hazards model
estat concordance	Compute the concordance probability
estat phtest	Test Cox proportional-hazards assumption
stphplot	Graphically assess the Cox proportional-hazards assumption
stcoxkm	Graphically assess the Cox proportional-hazards assumption
streg	Fit parametric survival models
stintreg	Fit parametric survival models for interval-censored data
estat gofplot	Graphically assess goodness of fit after streg, stcox, and stintreg
stintcox	Fit Cox proportional hazards model for interval-censored data
stintphplot	Graphically assess the Cox proportional-hazards assumption for interval-censored data
stintcoxnp	Graphically assess the Cox proportional-hazards assumption for interval-censored data
stcrreg	Fit competing-risks regression models
xtstreg	Fit random-effects parametric survival models
mestreg	Fit mixed-effects parametric survival models
stcurve	Plot the survivor or related function after streg, stcox, and more
stteffects	Estimate treatment effects using observational data
sttocc	Convert survival-time data to case–control data
sttoct	Convert survival-time data to count-time data
st_*	Survival analysis subroutines for programmers
fmm: streg	Finite mixtures of parametric survival models
bayes: streg	Bayesian parametric survival models
bayes: mestreg	Bayesian multilevel parametric survival models

The st commands are used for analyzing time-to-absorbing-event (single-failure) data and for analyzing time-to-repeated-event (multiple-failure) data.

For uncensored and right-censored data, you begin an analysis by `stset`ting your data, which tells Stata the key survival-time variables; see [ST] **stset**. Once you have `stset` your data, you can use the other st commands. If you `save` your data after `stset`ting it, you will not have to `stset` it again in the future; Stata will remember.

The `stintcox` and `stintreg` commands are designed for the analysis of general interval-censored data, including right-, left-, and interval-censored observations. It does not require `stset`ting the data.

The subsequent st entries are printed in this manual in alphabetical order. You can skip around, but if you want to be an expert on all of Stata's survival analysis capabilities, we suggest the reading order listed above.

Also see

[ST] **ct** — Count-time data

[ST] **snapspan** — Convert snapshot data to time-span data

[ST] **stset** — Declare data to be survival-time data

[ST] **Survival analysis** — Introduction to survival analysis commands

[ST] **Glossary**

For suggested citations, see the FAQ on citing Stata documentation.