cttost — Convert count-time data to survival-time data

Description

cttost converts count-time data to their survival-time format so that they can be analyzed with Stata. Do not confuse count-time data with counting-process data, which can also be analyzed with the st commands; see [ST] **ctset** for a definition and examples of count data.

Quick start

Convert count-time data to survival-time data using ctset data

    cttost

Same as above, but name the new weight variable mywvar instead of using the default name

    cttost, wvar(mywvar)

Menu

Statistics > Survival analysis > Setup and utilities > Convert count-time data to survival-time data

Syntax

> cttost [, *options*]

options	Description
t0(*t0var*)	name of entry-time variable
wvar(*wvar*)	name of frequency-weighted variable
clear	overwrite current data in memory
nopreserve	do not save the original data; programmer's command

You must ctset your data before using cttost; see [ST] **ctset**.

nopreserve does not appear in the dialog box.

Options

t0(*t0var*) specifies the name of the new variable to create that records entry time. (For most ct data, no entry-time variable is necessary because everyone enters at time 0.)

Even if an entry-time variable is necessary, you need not specify this option. cttost will, by default, choose t0, time0, or etime according to which name does not already exist in the data.

wvar(*wvar*) specifies the name of the new variable to be created that records the frequency weights for the new pseudo-observations. Count-time data are actually converted to frequency-weighted st data, and a variable is needed to record the weights. This sounds more complicated than it is. Understand that cttost needs a new variable name, which will become a permanent part of the st data.

If you do not specify wvar(), cttost will, by default, choose w, pop, weight, or wgt according to which name does not already exist in the data.

clear specifies that it is okay to proceed with the conversion, even though the current dataset has not been saved on disk.

The following option is available with cttost but is not shown in the dialog box:

nopreserve speeds the conversion by not saving the original data that can be restored should things go wrong or should you press *Break*. nopreserve is intended for use by programmers who use cttost as a subroutine. Programmers can specify this option if they have already preserved the original data. nopreserve does not affect the conversion.

Remarks and examples

stata.com

Converting ct to st data is easy. We have some count-time data,

```
. use https://www.stata-press.com/data/r18/cttost

. ct

Count-time data settings

            Time: time
        Failures: ndead
     Number lost: ncens
  Number entered: All enter at time 0
 Group variables: agecat treat
```

```
. list in 1/5
```

	agecat	treat	time	ndead	ncens
1.	2	1	464	4	0
2.	3	0	268	3	1
3.	2	0	638	2	0
4.	1	0	803	1	4
5.	1	0	431	2	0

and to convert it, we type `cttost`:

```
. cttost

Count-time data settings

            Time: time
        Failures: ndead
     Number lost: ncens
 Number entered: All enter at time 0
Group variables: agecat treat

Converting count-time data to survival-time data ...

Survival-time data settings

           Failure event: ndead!=0 & ndead<.
Observed time interval: (0, time]
     Exit on or before: failure
                  Weight: [fweight=w]
─────────────────────────────────────────────────────────────────────
            33  total observations
             0  exclusions
─────────────────────────────────────────────────────────────────────
            33  physical observations remaining, equal to
            82  weighted observations, representing
            39  failures in single-record/single-failure data
        48,726  total analysis time at risk and under observation
                                          At risk from t =          0
                                 Earliest observed entry t =          0
                                     Last observed exit t =      1,227
```

Now that it is converted, we can use any of the st commands:

```
. sts test treat, logrank
        Failure _d: ndead
  Analysis time _t: time
            Weight: [fweight=w]

Equality of survivor functions
Log-rank test
```

	Observed events	Expected events
treat		
0	22	17.05
1	17	21.95
Total	39	39.00

```
                 chi2(1) =   2.73
                 Pr>chi2 = 0.0986
```

Also see

[ST] **ct** — Count-time data

[ST] **ctset** — Declare data to be count-time data

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