

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

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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)
```

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Syntax

```
cttost [ , options ]
```

<i>options</i>	Description
<code>t0(<i>t0var</i>)</code>	name of entry-time variable
<code>wvar(<i>wvar</i>)</code>	name of frequency-weighted variable
<code>clear</code>	overwrite current data in memory
<code>nopreserve</code>	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](https://www.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
```

treat	Observed events	Expected events
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

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